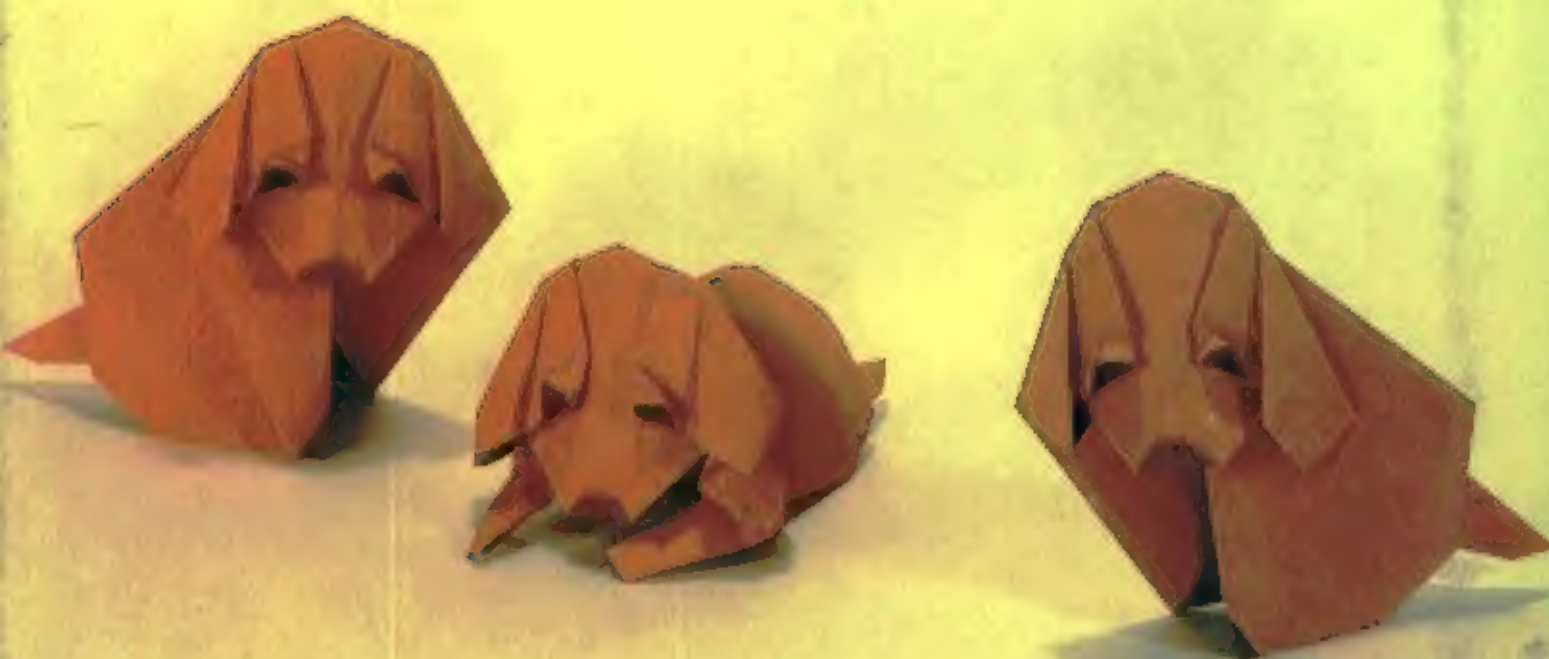


Origami Museum **I**

ANIMALS

by Akira Yoshizawa



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by Akira Yoshizawa

Translated by Hiroko Ichiyama and Mary Kiyono

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PREFACE

It gives me the utmost joy to create figures which are not only beautiful but are heart-warming and endear themselves to people. Every diagram introduced in this book was born out of my longing for many years to do this.

Creative Origami with free expression, which I admire most, begins by working with limitless lines and results in the production of the most beautiful figures which perfectly match the given theme. These folding lines must follow the laws of nature. The theme of this book is animals; therefore it is necessary for everyone of us to get acquainted with animals and observe them carefully in order to bring liveliness to the folded objects.

Here, I have tried to fold paper more freely and creatively combining planes and folding lines most effectively. In this way, each person can produce something unique out of plain paper and one's own creativity becomes tangible and alive.

In Japan, origami of the past was a repetitious copying, simply folding the same subjects exactly as others did. In such a way, there was no creativity in the works.

In 1955, there was exhibit of my works in Europe presented by Dr.Gershon Legman. Through the exhibition my works were introduced to many nations of the world as a completely new art of paper work. Since then, more and more people have become interested in and understand origami.

I believe that origami carries the message of peace to everyone in the world in the coming 21st century. I sincerely hope that origami can bring each one of you joy, at the same time can reach every corner of the world.

Akira Yoshizawa
President of
International Origami Society

September 1986

"ENDLESS JOY AND WONDER"

It is a source of great delight to know that in recent years the art of origami has spread throughout America, Europe and many other countries of the world.

It is more than fifty years since I first became enchanted with origami. I then saw, through Mr. Yoshizawa's books, that unbelievably beautiful, life-like objects could be created from a combination of folding lines and planes on a simple piece of paper. At the same time, it filled me with a sense of endless joy and wonder. Since that beginning, I came to know Mr. Yoshizawa through years of correspondence and finally, in 1959, I was able to meet him in person.

Mr. Yoshizawa, the gifted master of origami, who excels others by far, has created artistic, ingenious, heart-warming creatures and figures in abundance. I am so happy that there is now a book in English so that you will be able to not only discover the great joy of origami but will receive an insight into the natural scientific and philosophical knowledge which underlies all his work.

It is the desire of Master Yoshizawa that origami enthusiasts will share his hope that this creative art will be correctly introduced to others.

I myself continue to value creative origami, to spread the knowledge of it because I am convinced that it is meant to enrich everyone, everywhere.

Lillian Oppenheimer

*Lillian Oppenheimer
Founder and Director
The Origami Center of America*

October 1986

TABLE OF CONTENTS

PREFACE	5
"ENDLESS JOY AND WONDER"	6
SYMBOLS OF FOLDING	7
BUTTERFLY	8
TADPOLE	10
JUMPING FROG	12
SNAIL	14
CICADA	16
CRAB	18
GRASSHOPPER	20
JUMPING ORIGAMI	22
DRAGONFLY	24
WHALE AND FISH	26
LOBSTER	28
HERMIT CRAB	30
TURTLE	32
BIRD	34
FLYING DOVE	36
PENGUIN	38
CROW	40

MOTHER CROW AND BABIES	42
DUCK FAMILY	44
OWL	46
DOVE	48
COW	50
RABBIT	52
RACCOON, The Drummer	54
SNAKE	56
DRAGON	58
MOUSE	60
TIGER	62
GIRAFFE	64
GORILLA	66
GIANT PANDA	68
FACE OF DOG	70
PUPPY	72
IGUANODON	74
ELEPHANT	76

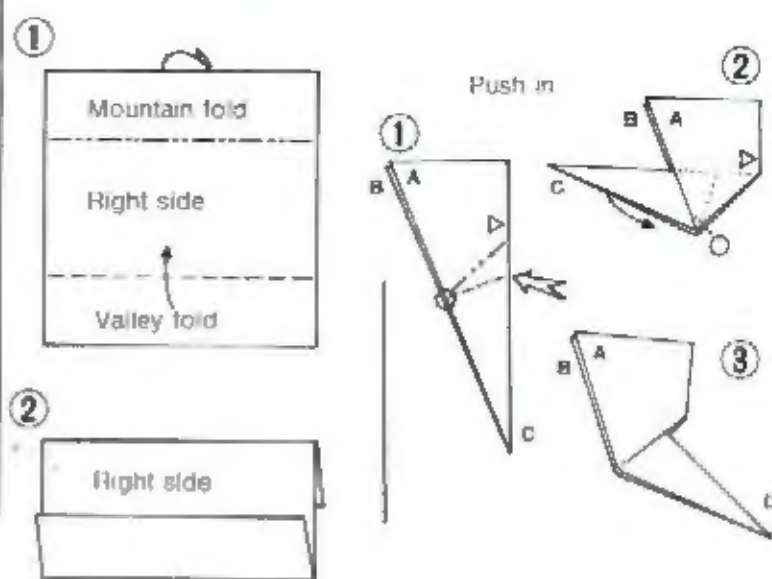
ABOUT THE AUTHOR	78
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SYMBOLS OF FOLDING

	Mountain fold
	Valley fold
	Fold toward right side
	Fold toward wrong side
	Rolled fold
	Turn over
	Pull out or push in
	The diagram magnified
	Curve softly
	Indicates the direction of the fiber in the paper
	Center line

NOTE:

- The symbols only shown on the exterior surfaces.
- If the instructions are the same for several forms, the repetitious parts are deleted.
- When diagrams are sufficient, instructions are omitted.



- We used symbols ABC plus and others when necessary to mark the corners and surfaces.
- In the small areas of the diagrams, the folding lines are extended. If you match your paper to the corners it will make it easier for to fold a figure.

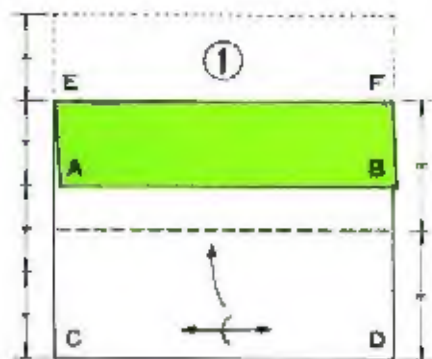
BUTTERFLY



With a sheet of paper and a bit of free time, you can enjoy creating endless beauty and joy. Paper for origami can be found in abundance all around us in innumerable textures and types. In Creative Origami the paper is not cut or pasted but is simply folded and the lines and refraction express the beauty of nature, delight or sorrow. Just as there is an endless variety of paper, so are there any number of themes you can choose from. However, unless you first become familiar with the basic folds, you cannot fold freely ; only then will you gradually be able to step further into the world of creative art.

After the long cold winter, spring has come. Flowers bloom in the fields and butterflies flit among them enjoying their sweet scent. What a pleasure it would be if you could write a poem or fold a piece of paper to express the joy of spring.

Select your paper so that the color and texture will match the fragility of butterflies. Stick folded butterflies on the wall or make a mobile with them.



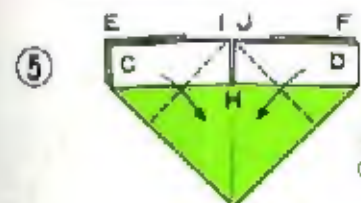
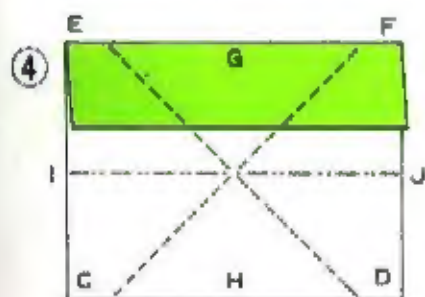
1. Use a square sheet of paper. Fold at the point of $\frac{1}{4}$ of the sheet. Then fold it in half. (You can use a rectangular sheet with a 3 : 4 ratio.)



2. Fold I & J upward as arrows indicate.



3. Open as in diagram 4. Mark the mountain and valley folds, refold as in diagram 5.



5. Fold C & D downward.



6

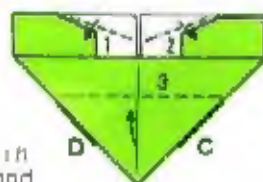


7. Push down C & D.



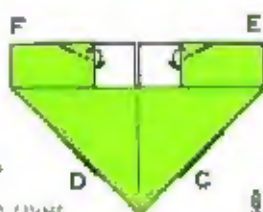
8

8. Turn over.



9

9. Fold in order of 1, 2 and 3.

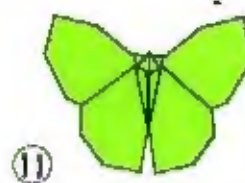


10

10. Turn over.

10. Push the corners in.

Finish

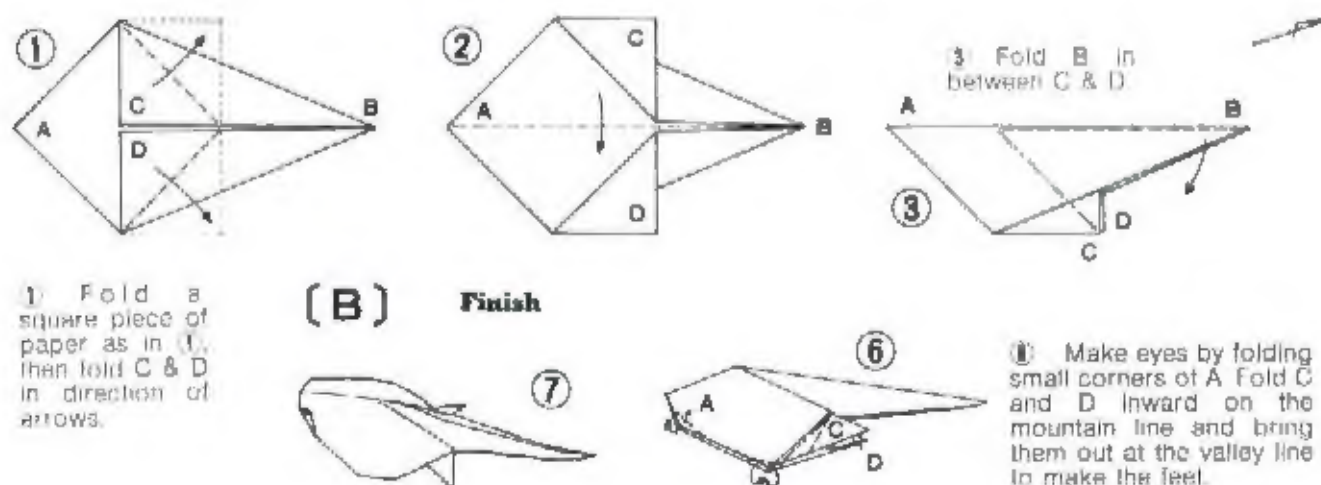
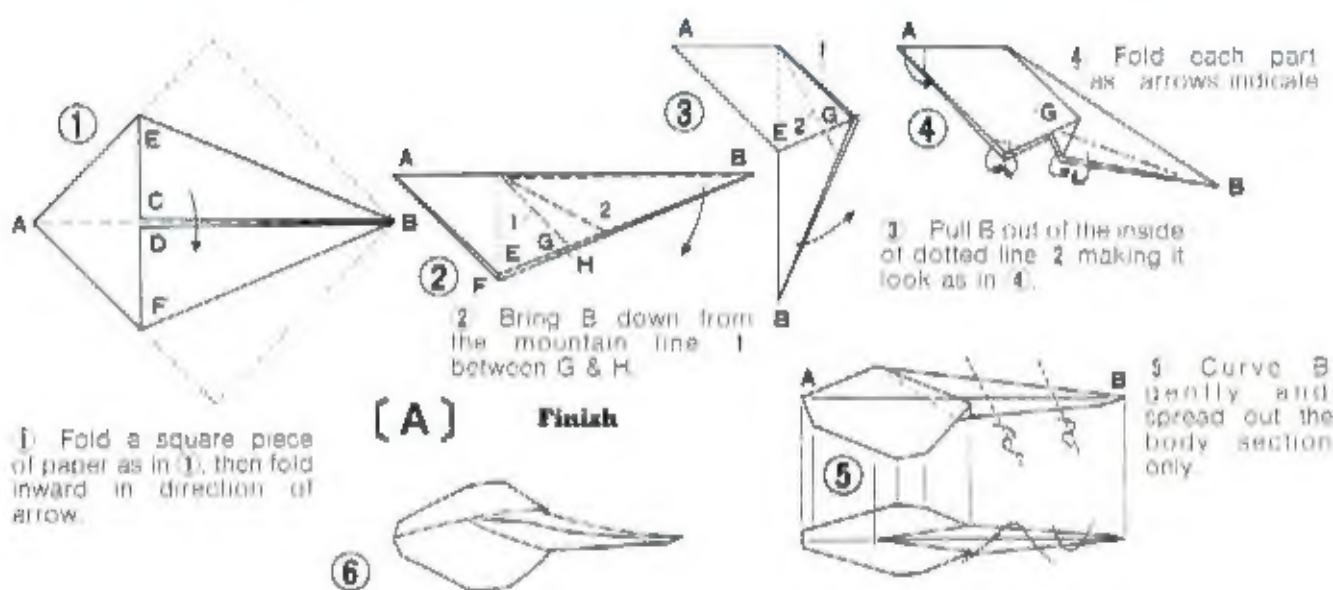


11



12

12. Adjust the head and body by folding on the mountain and valley folds.





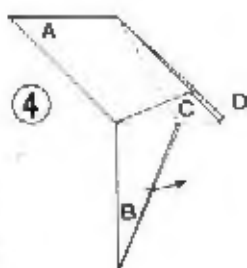
TADPOLE

I grew up in the country and I often used to walk barefooted on the paths between the rice fields. Many times, I found tadpoles swimming in the streams or in the irrigation water. A small tadpole looking like a black ink spot with a tiny tail soon grows to the size of a lima bean. Then, rear legs sprout near the tail and forelegs later appear. Finally, there is a baby frog, a perfect miniature of its parent, hopping around all over the place.

When a baby frog hears footsteps, it quickly jumps into the stream and hides itself, leaving behind only the sound of a faint 'splash'. If I was quick enough, I could catch a tiny frog in my hand. When I slowly opened my fingers, I would find it looking up at me in surprise. Yes, I remember my childhood days very well.

Here then is a tadpole. After you learn how to make it, why don't you make many more? You can use small sheets of gray paper and arrange them as if they are swimming in a pond.

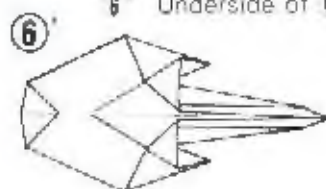
4 Turn B inside dotted line.



5 Fold in corner of A, then fold part of B from mountain line in shape of 6.

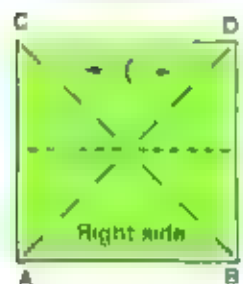


6 Underside of 6

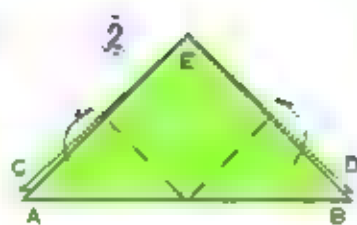




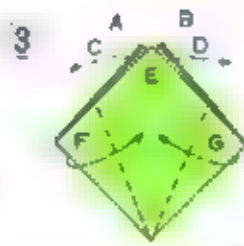
METHOD 1



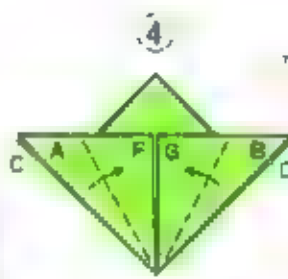
1 Mark both m
+ 1 x 4 y H 4
2 3 4 y



2 Fold in + 30 turn
3 4 5 6 7 8 9 10



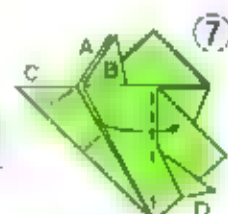
3 Fold in + 30 turn
4 5 6 7 8 9 10



4 Fold in + 30 turn
5 6 7 8 9 10

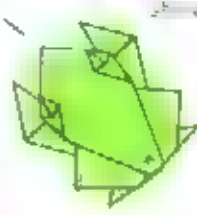


5 Fold in + 30 turn
6 7 8 9 10



6 Fold in + 30 turn
7 8 9 10

Press point X and slide
your finger then frog will
jump forward.



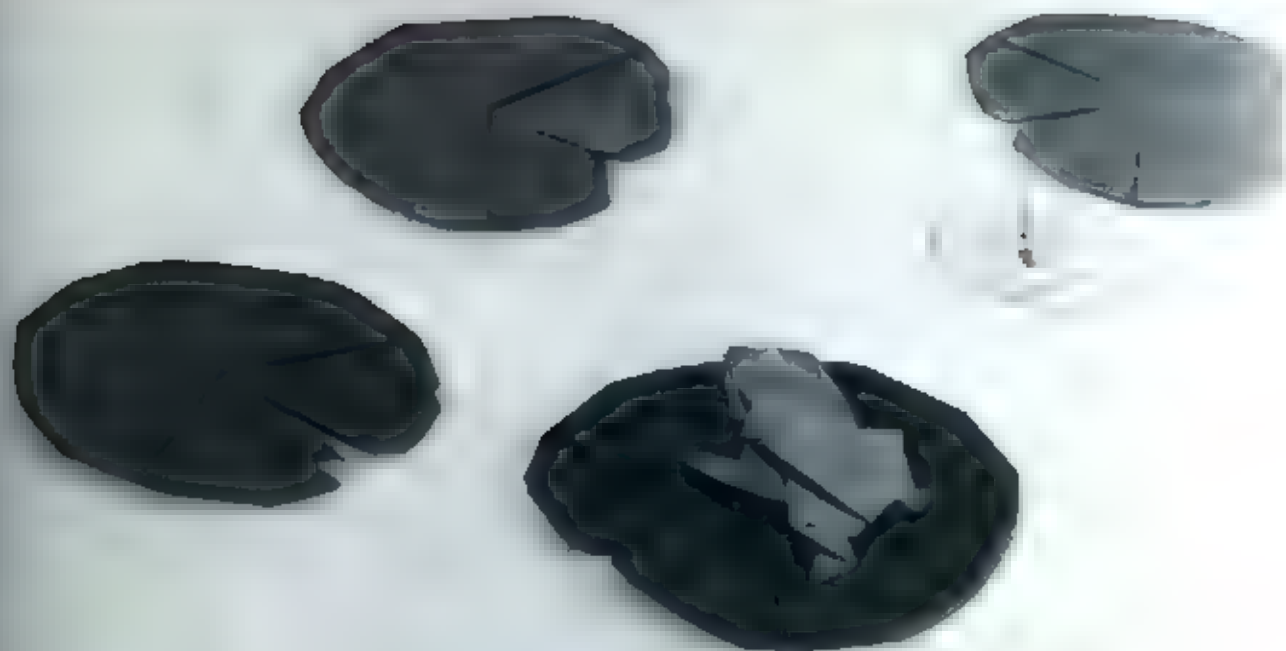
7 Fold in + 30 turn
8 9 10



8 Fold in + 30 turn
9 10

9 Turn A & B
down out
draw F
the right side
and finger
jump forward
10

Finish



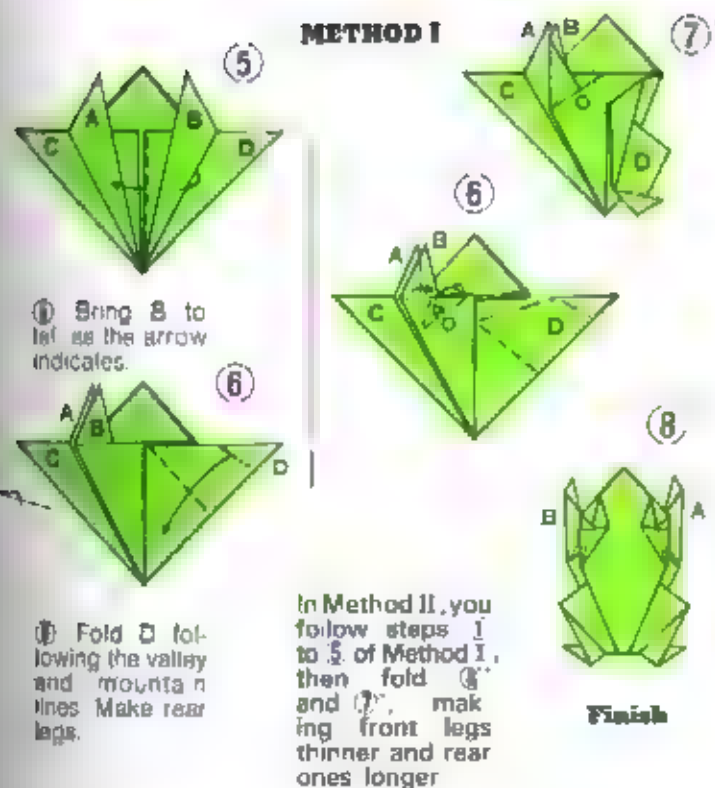
JUMPING FROG

Let's make a mobile origami. The diagram for the frog is designed functionally so that it produces a movement just like a real frog. If you fold it well, it will jump four or five times the length of its body. You will have fun playing with the folded frog by having it jump towards a holepunch marked on drawing paper or onto your notebook. You can also fold many frogs and let them have a jumping competition.

By varying the size of the body or curving the nose, you can also make different kinds of frogs such as the green frog or a bull frog.

Be careful to note the \leftarrow in diagram 1, which denotes the direction of the fiber in the paper.

METHOD I



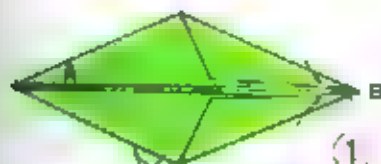
SNAIL



1. Open up at 1.
2. Fold D over on
the valley line to
make 1.

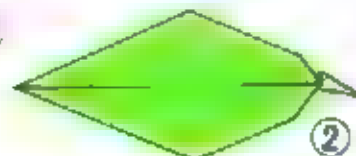


3. Turn the paper
over and fold
the top edge
down to the
bottom edge.



LEAP

Finish



1. Make diagonal
lines on a square piece
of paper. Fold them all
together.

2. Fold the paper in half
along the diagonal line.
Fold the top edge down
to the bottom edge.
Fold the paper in half
again.

After a light afternoon shower, we
often find snails sliding slowly down
the trunk of a tree or coming out from
under the fallen leaves. There are
several shapes of snails shown in this
picture.

If you fold E in diagram 1 inward
instead of outward, the body section
and the shell section will be reversed.
This will determine whether the shell
winds sinistrally or dextrally, in other
words, counter-clockwise or
clockwise.

The spiral of the shell in the
picture is folded from the outside. You
can pinch the paper softly and fold
the curving line. To make the shell
larger, you can slightly shift the
folding line.

Turn A of diagram 10 to the right
to make the legs. B and C are for the
little horns.

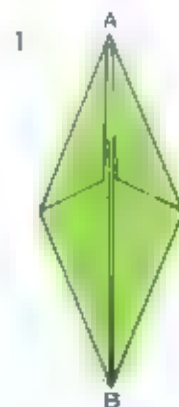
CICADA

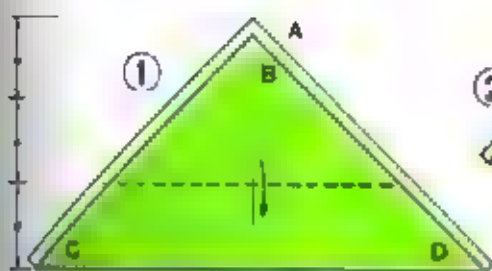
When you wish to make origami of beautiful features or cute insects, it is best to watch and observe carefully how they act and live in their natural surroundings instead of depending upon illustrated books and photographs.

3. While watching a tiny insect that is doing its very best to survive, you cannot help but feel love for it. When you have this feeling, love will invariably show up in your work.

There are many kinds of cicadas. You can try to make different ones out of the same paper, such as the cicada that sings in the tree under the hot summer sun, the hauntingly clear-toned cicada that you can hear in the morning or evening mist and the small cicada that sings at the end of summer.

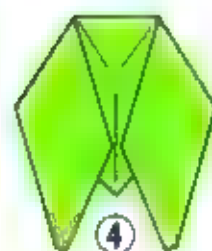
1. Take a rectangular piece of paper and fold it in half lengthwise. Then fold it in half again widthwise. Unfold it and you will have a cross shape. This is the basic shape for making a cicada.



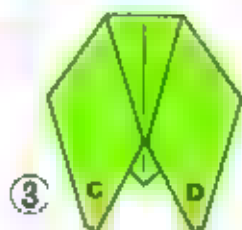


2. Match two top \circ marks with the one in the center

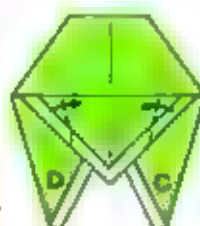
(I)



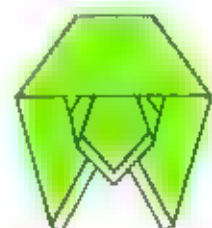
Finish



3. Turn over.



The back side of 3. Fold inside along the dotted line.



The back side of 4.

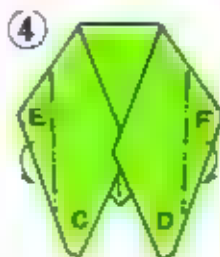
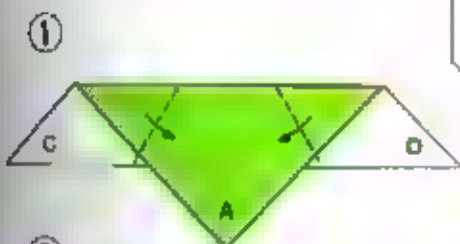
1. Make a crease along diagonal line AB. Slide B down slightly as shown in the diagram. Fold AB together down on the valley fold.

Continue from step 4 of (I). Overlap C with D as shown.

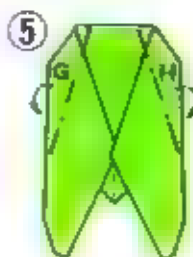
(II)

(III)

1. Prepare an isosceles triangle out of a square sheet of paper. Fold A down at $1/3$ of length.



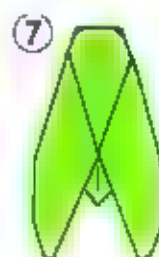
4. Fold E & F on the mountain folds.



5. Fold G & H inward.



6. Make eyes by folding the corners.



Finish



2. Fold as arrows indicate.



Finish

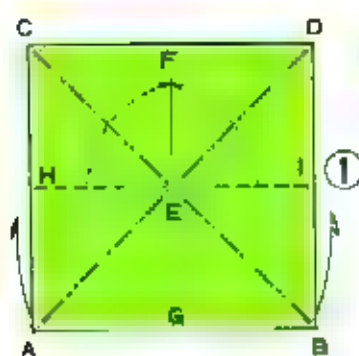
(IV)



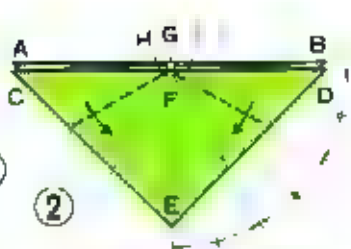
Spread wings of cicada seen from the back of 3. Hold A with fingers and throw it. It flies well.

(V)

For the cicada shown at the top of the picture fold an isosceles triangle at $1/4$ of the length. Make many peats on A. Follow steps in (I) and (II).



1 Mark mountain and valley folds as shown to do as 2

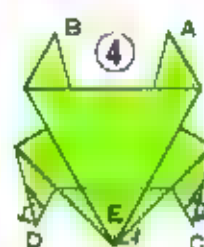
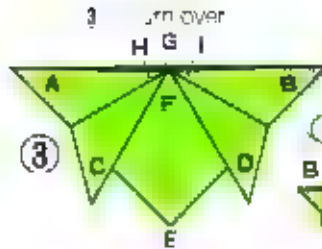


2 Fold C & D on dotted lines marked

[A]



Finish



3 Fold A & B backward as arrows indicate



4 Fold D, L & C as arrows indicate

5 Let it sit down with D, F and C

to make (C) folded in two fold (A) will stand better

1111111111

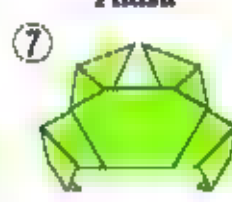
Follow steps from 1 to 5 of [A]

6 Fold A & B backward as shown in the above 5

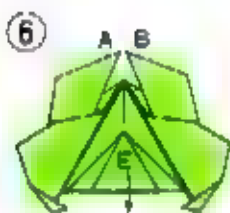


7 Fold G as shown in the above 6

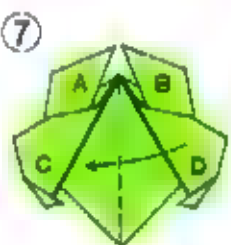
[B]



Finish



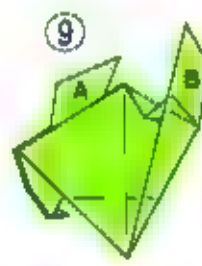
8 As shown in 7 make folding creases & open again and fold following steps from 7 to 8 in [A] and [B]



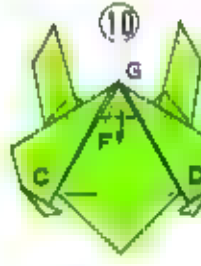
9 Bring D in direction of arrow



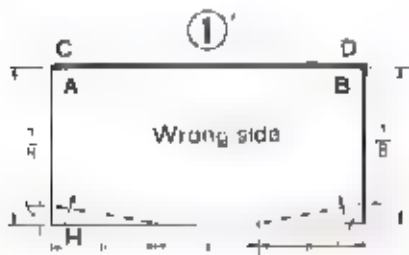
10 Put out the part of B that folds over. Make the mountain fold and pull up to the place shown by the dotted lines



11 Fold A same as B. Spread C & D open



12 Fold F downward. Part of dotted lines in the above should be folded inside.



Wrong side

13 The right way to make eyes

[C]

Finish



14 Let it stand on corners of L, C & D and pull out A & B to form legs

CRAB



11. Pull G that
is half of the
back of H apart
while holding H.



13. Fold the corner
of G and bring it
down to the corner
of F. Fold A & B on
the inside and valley
folds.



12. Fold H & I
along folding lines
shown in 11. Fold
C, D, E & F as
arrows indicate.

It is very difficult to make a figure of any creature that has many legs but I have succeeded in folding a realistic crab using complicated yet basic folds. The purpose of origami is not necessarily to reproduce a replica of a living creature but to capture its characteristics, employing the simplest method possible.

With a square piece of paper, I made each part of the body by simply folding the corners. I was able to indicate the eyes and the foaming mouth by utilizing the different colors of the right and wrong sides of the paper. I believe that it succeeds in expressing the characteristics of a crab.

In folding animals, I usually make the figure on the basis of the bone structure. In the case of a crab, its shell represents its bone structure. You will be able to make different kinds of crabs by varying the angle of the shell, the size of the legs and the shape of the claws.

In order to show that there are four legs on each side, the feet should be folded larger to give them volume.



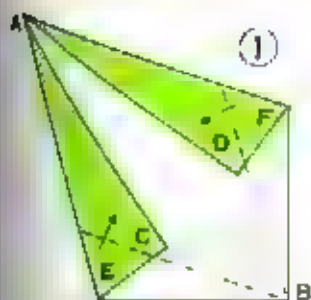
GRASSHOPPER

There are no boundaries — copy grasshoppers as a series of silhouettes — in this case I have created forms upon the creature in a more abstract way. Watching grasshoppers in the field makes me eager to express their movement in diagram.

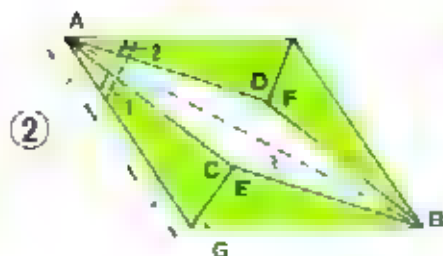
Grasshopper (A) When you fold all of diagram 1 back and gently push the top down, the silhouette you will suddenly have a new figure, instead of a more diagrammatic pattern.

Grasshopper (B) This grasshopper has its rear legs extended and is flying through the air. A grasshopper makes a lot of a little fly with fly by using their wings springs upon its rear legs and glides through the air. The grasshopper in diagram 2 can easily be shown earlier if you push down EF of 2 which makes a little more space under the wings and this creates a special air's rear.

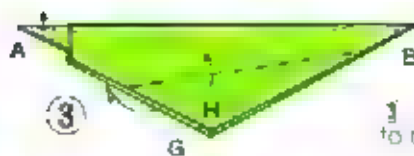
Grasshopper (C) This is grasshopper (B) at rest, with its wings folded.



1 Use 8 centimeter square paper
Fold as in 1 Fold F & E inward



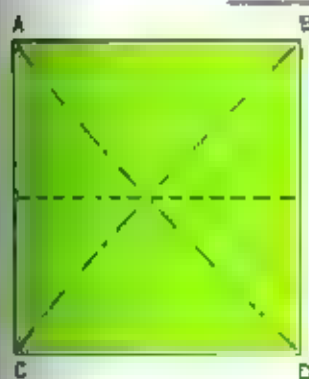
2 Fold A down on the valley fold 1 and fold up on mountain fold 2
3 Fold into half on the valley fold 3



3 Pull out A and fold G & H upward

[A]

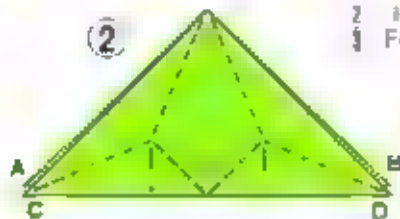
Finish



(1)

(2)

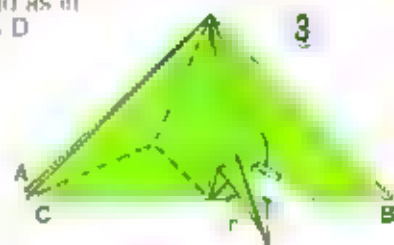
2 Pinch D and fold as in 1
3 Fold C same as D



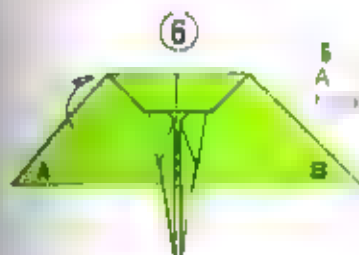
1 Mark valley and mountain folds and fold as in 2

(5)

5 Fold L twice as shown

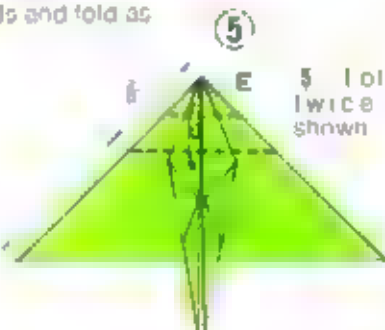


(3)



(6)

6 Bring A & B together



(4)

7 Fold in direction of arrows

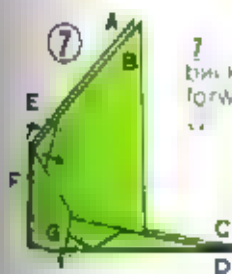
[B]

Finish



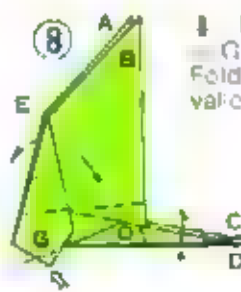
(9)

8 Hold at point C of 8. Hold the two wings. Throw into the air



(7)

7 Fold F backward and E forward. Pull out



(8)

8 Fold the corner G. Spread C & D. Fold wings on the valley line

[C]

Finish



(12)

11 Fold the valley fold and bring over one of the wings. Fold the bottom of the stomach and the wing tips inward. Fold C & D to match

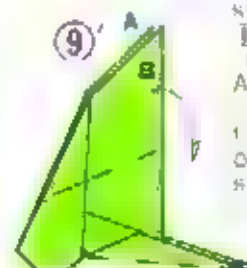


(11)

12 Fold down as shown



(10)



(9)

9 Follow steps 1 to 12 of (B). Fold A & B together. Fold inward on opposite side



JUMPING ORIGAMI

Children are very interested in moving objects. The ones shown here, unlike those which must be made by an adult, can be made and enjoyed together with the parents.

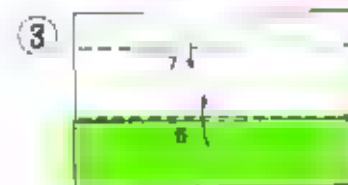
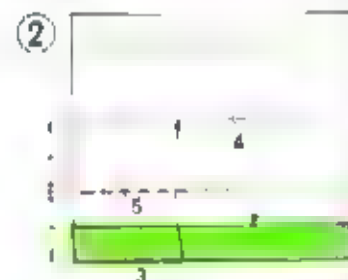
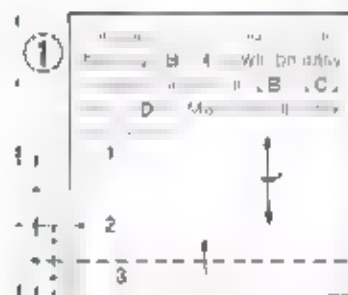
Folding paper in layers makes it more tractable; then a light tap on the area indicated by the arrow or a slight push will make it bounce forward.

There are vertical and horizontal fibers running through origami paper. It is easier to fold the paper along horizontal fibers. However, in making jumping figures as in 1 of this paper, [A] it is wise to fold the paper against the vertical fibers.

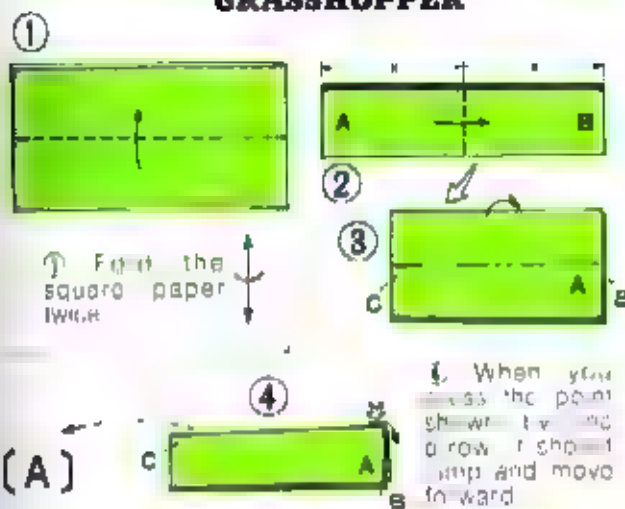
Here I have shown several simple folds. The common factor among them is that from these forms you will be able to progress to individualistic variations.

When teaching children though, I would advise you to teach one pattern until they have thoroughly learned it and after an interval go on to a different pattern.

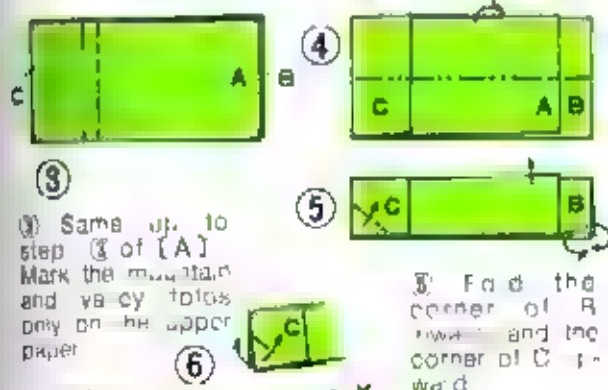
(Factor 1)



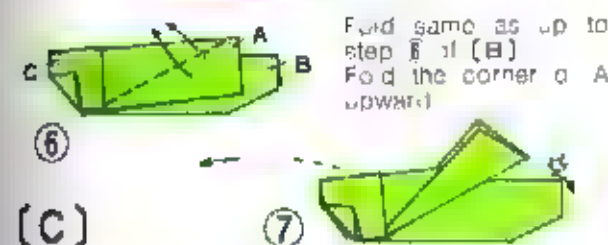
GRASSHOPPER



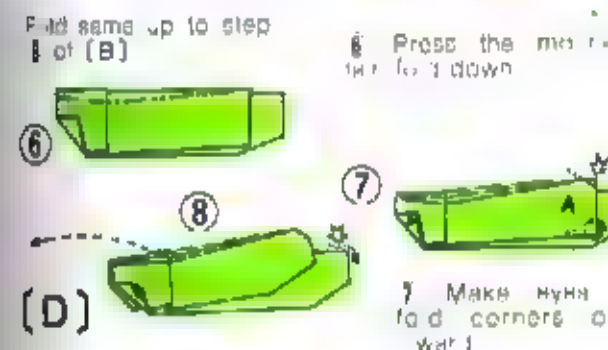
[A]



[B]

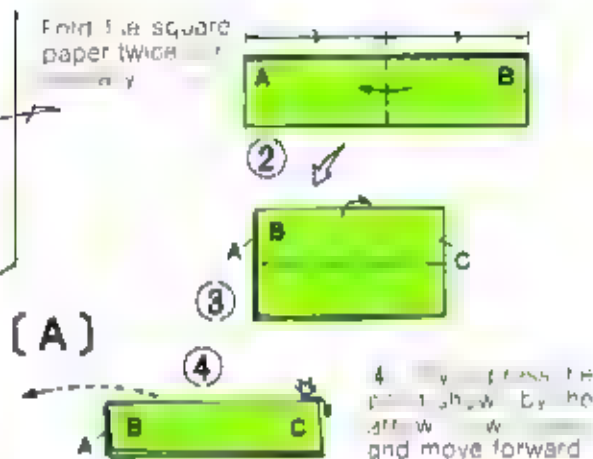


[C]

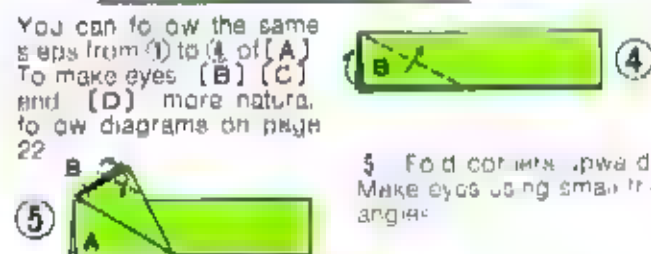


[D]

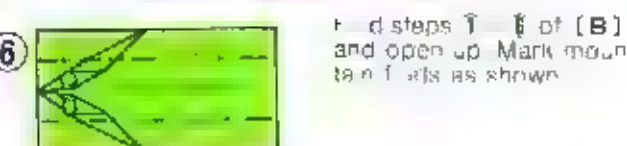
FROG



[A]



[B]



[C]



[D]



DRAGONFLY

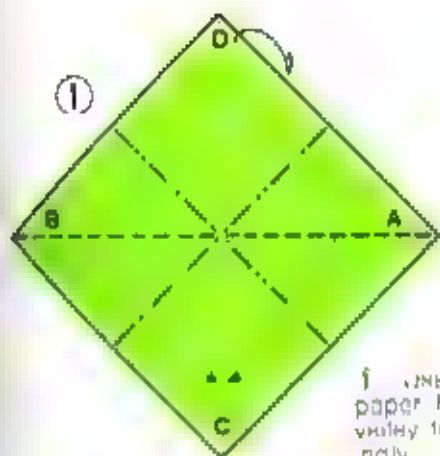


Lets fold a red dragonfly fitting in the bright autumn air

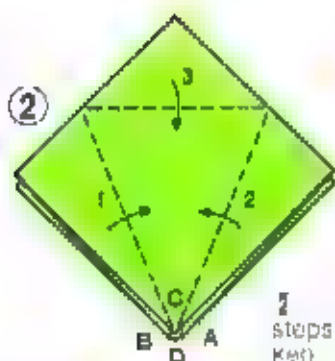
As shown in the photograph you can make a very easy to fold dragonfly fitting on a long stem which is made from a sheet of long paper

For the body of the dragonfly, take the head you may simply cut the paper and push it in from the sides. You can make many dragonflies with yellow and red and let them perch on the top of a pole or make a mobile of them

You will get a great deal more enjoyment if you do make several of these dragonflies in motion instead of just folding one by following a diagram

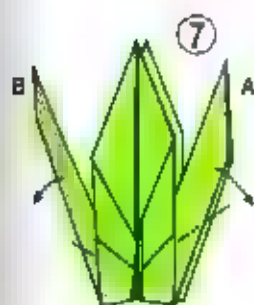
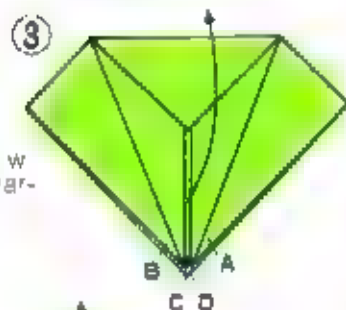


1. Take a square piece of paper. Mark mountain and valley to do. Fold accordingly.

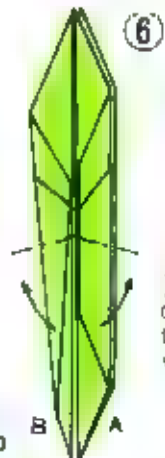


2. Fold the wings as marked.

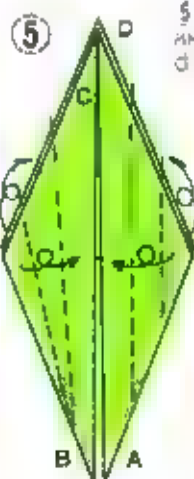
3. Pull out C and make it.



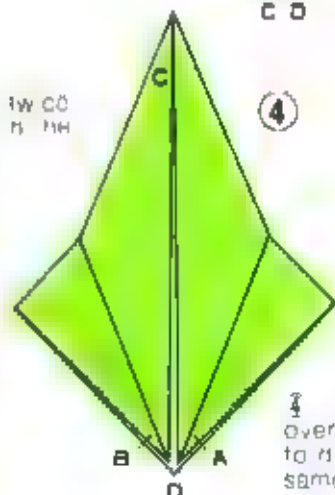
4. Fold A & B down.



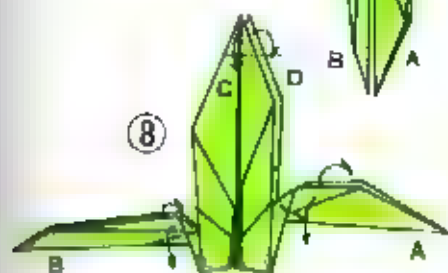
5. Pull out A & B between wings.



6. Fold the wings as shown in the diagram.

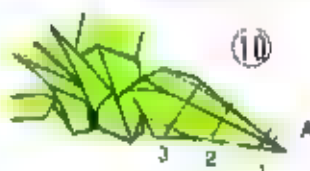


7. Pull over D to the same as C.

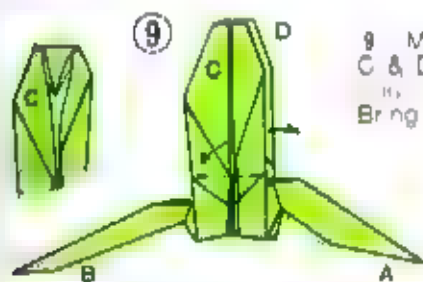
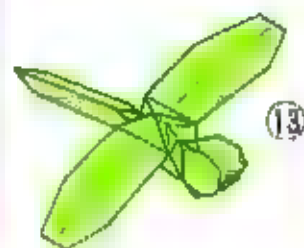


8. Fold A & B. Fold C & D inward.

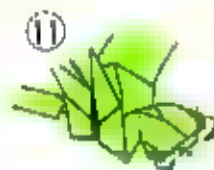
9. Fold the corner of A inward. Make double tiered face by folding or mountain and valley folds.



Finish



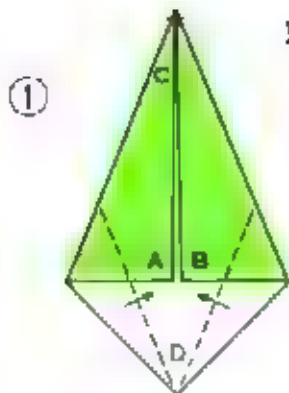
9. Make wings by folding C & D at the point of valley. Bring A out to the dotted line.



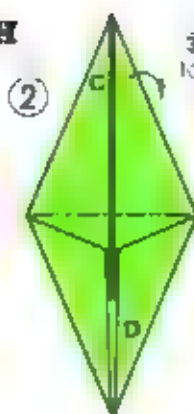
Make eyes in the wings 11 and 12.



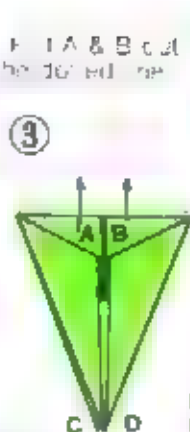
FISH



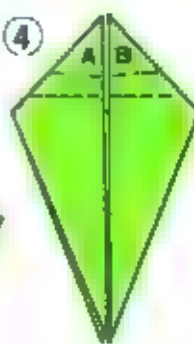
1 Fold a square piece of paper as in 1



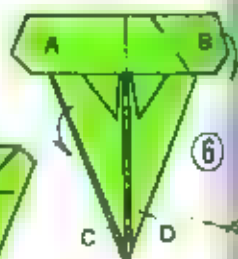
2 Fold C to D backwards



3 Fold A & B to the center line

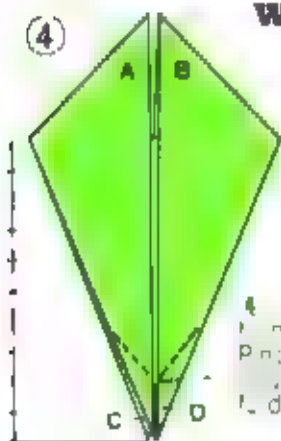


4 Fold on mountain and valley folds

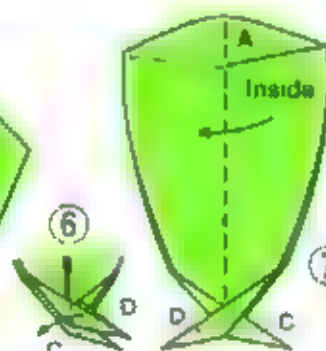


5 Fold the corner of B. Fold in half

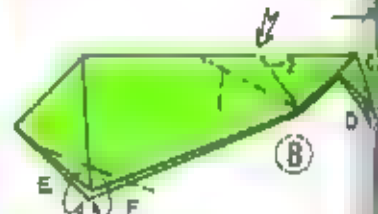
WHALE



4 Same steps as 1 to 4. Pinch C & D together and fold as in 5



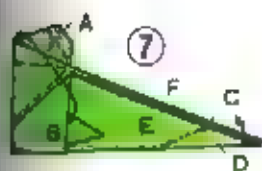
5 Fold D to C and place A on top of B



6 Fold E & F forward to overlap. Pinch together upwards



WHALE AND FISH



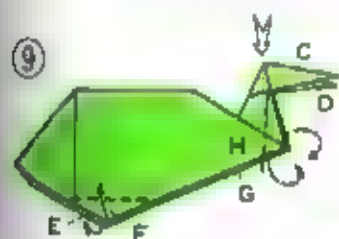
⑦ Put corner of A in pouch of B. Fold C & D together between E & F.



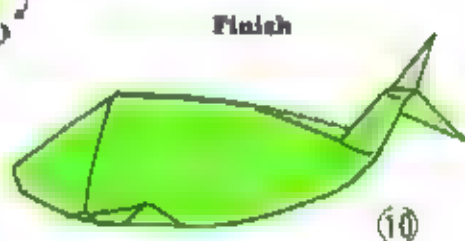
⑧ Fold D down at the dotted line.



Finish



⑨ Fold E & F outward. Fold corners at G & H. Put out the tail gently and press the top to flatten.



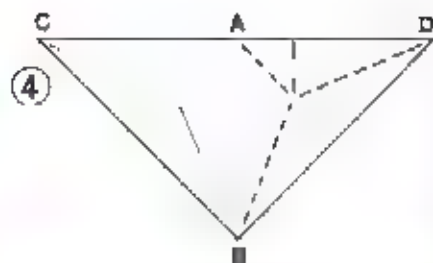
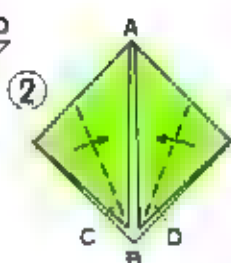
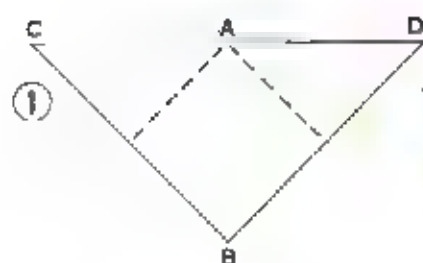
Finish

⑩

Let us make a whale the biggest animal of all and a tiny fish.

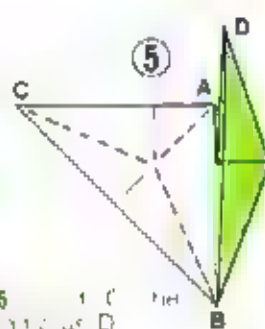
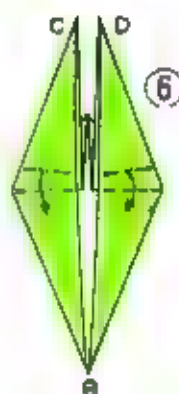
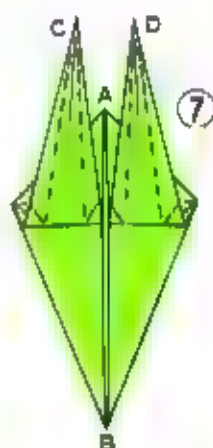
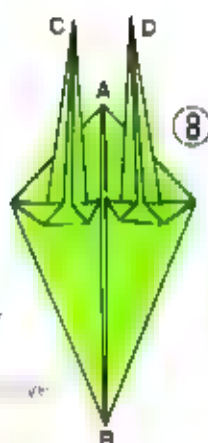
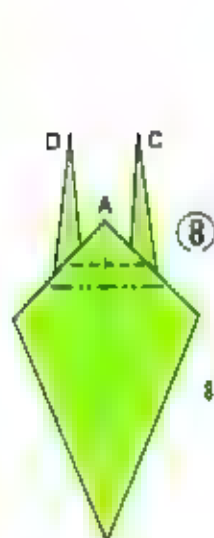
First, you should learn the folds on a piece of paper about 15 centimeters (6 inches) square and then you could use a piece of fancy paper and make one as large as you like. When you use this type of paper, it is advisable to dampen it to make it more pliable.

In using bigger sheets of paper, take care to fold them roughly in order to avoid making wrinkles. This will protect a good image of the animal as a whole. If you make the abdomen round, the whale will look as if it is swimming gracefully with a balanced movement.



Make this isosceles triangle out of a square piece of paper. Follow steps 1-3 now. Then open it up to make 4.

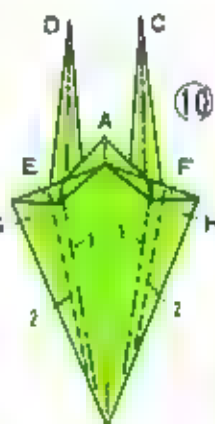
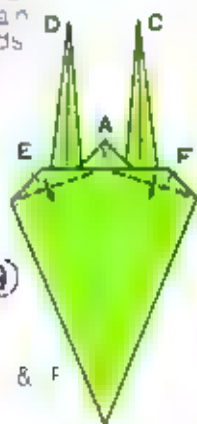
4 Follow the diagram and fold A and D as shown.



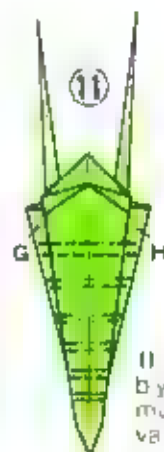
5 Fold C & D according to mountain and valley folds.

12 Make mountain folds 1 & 2 and fold on the horizontal line.

6 Fold according to mountain and valley folds.



7 Fold C & D along mountain line. Fold the mountain folds and try to make them pop out. Then fold the valley folds 1 & 2 and bring G & H outwards.



11 Make peaks by folding mountain and valley folds.





12. Fold the paper in half and glue the sides together. At the valley at C, mark with your finger and pull out each piece of paper. The paper should look like 14.



13

FINISH



14

LOBSTER

In Japan, a stately red lobster is an indispensable part of the New Year's decoration.

Let's make a lobster using a larger sheet of red paper. It can be decorated with pine needles and bamboo leaves made from green paper.

To capture the characteristics of the lobster, I have used a triangular shaped piece of paper. If you use thin paper, you can simply fold it into half.



HERMIT CRAB

There are many lovely creatures on the beach in the summer. Among them are the amusing hermit crabs which I never tire of watching.

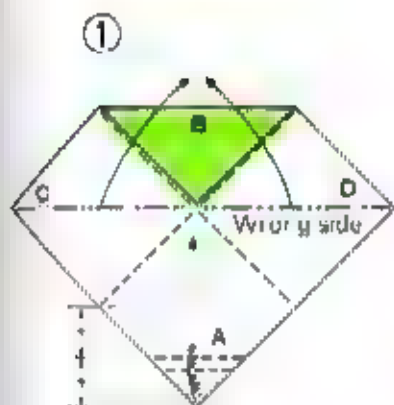
The hermit crab has claws like a crab. With its protruding eyes and minute antennae it cautiously walks around and at the slightest noise or movement quickly withdraws into its shell, slamming the entrance shut with its big claws.

The head and claws of the hermit crab are similar to those of the shrimp, but it may live in a spiral shell, projects soft body. As it grows bigger it must move to a larger shell. That is why in Japanese its name means "house borrower".

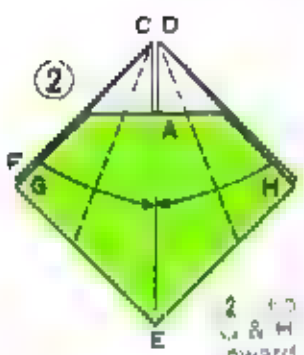
Hermit crabs which live on the beach are a type of land crab. Others live only on the land and there are some which are good at climbing trees.

You can make your hermit crab come to life by the way you hold the legs or by changing the color of the shell. You can use two different colors of paper, back to back, to show the contrast between the body and the shell. The head or legs can be pushed in or out of the shell to alter the appearance. In the photograph above the hermit crab in the middle is colored more realistically.

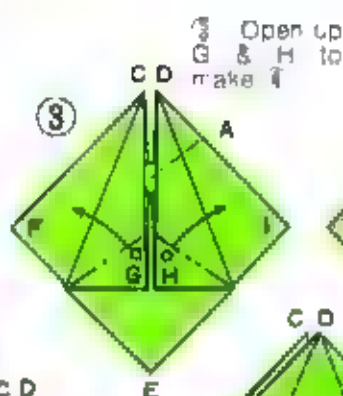
[A]



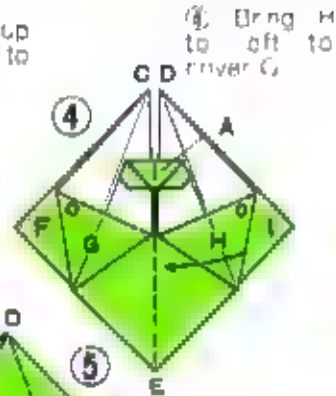
① Make mountain and valley folds on a piece of square paper. Fold B first, and fold A by rolling up as shown. Make 1/2 as in the diagram.



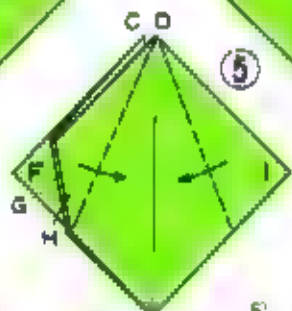
2. Fold 1/2 & H inward



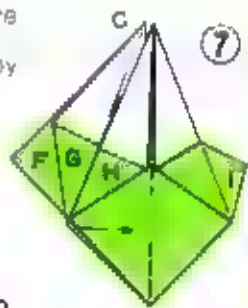
3. Open up G & H to make 1/2



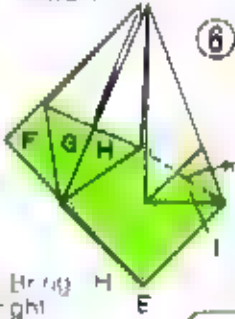
4. Bring H to left to mirror G



5. Fold H & inward



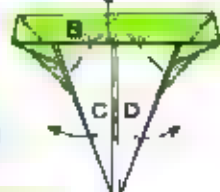
6. Bring H to right



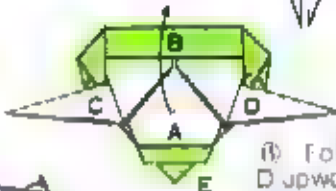
7. Put B out to the dotted line. Fold G & D in direction as shown



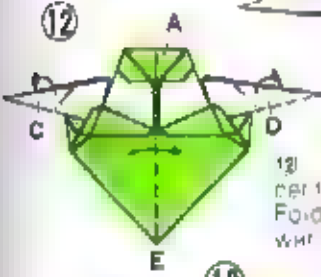
8. Follow the same steps 1, 2, 3, 4, 5, 6, 7 for left side



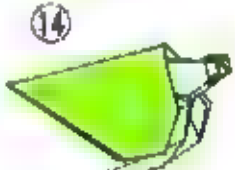
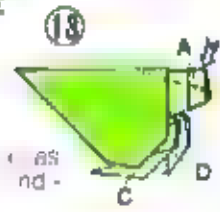
9. Fold A, G & D upward on the valley line



10. Fold at the center to fold 1. Fold C & D inward

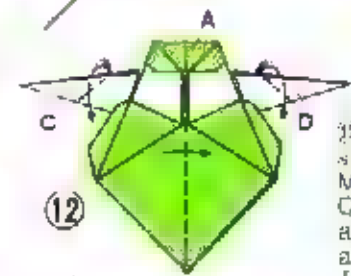


11. Push A as the arrow indicates



Finish

[B]



12. Follow same steps 1-11 of [A]. Make valley folds on G & D. Open up the angles around C & D as the arrows indicate. The fold is half on the center line.



13. Fold A on mountain fold 1 and bring it back to the valley line 2



14. Make eyes by folding the corner of A. Pinch the two sheets inside of C and pull A out to the dotted line. The sheet will pop up. Press down to desired appearance.

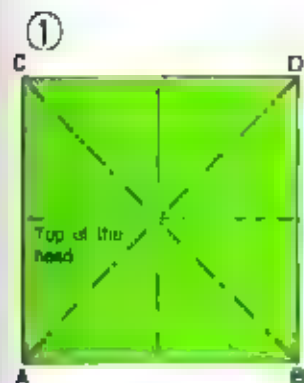


TURTLE

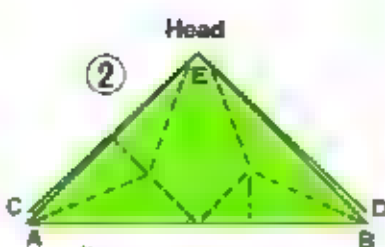


There are many approaches to the art of folding or gami, such as the realistic, the diagrammatic or the abstract. Here I have made a realistic sea turtle like a sketch from life. The artistic approach to folding or gami, you must first decide on the object that is to be folded and design the folding lines accordingly. You cannot just come up with the figure by vaguely playing with the paper.

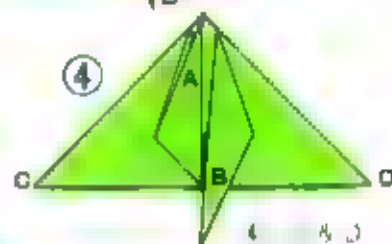
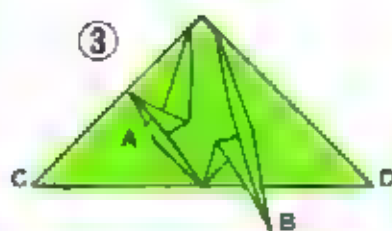
When you fold each part with meaning. In this case, it means to focus on the head of the turtle. The four corners the paper will become its front and rear legs. You will find it easy to master if you compare each part as you fold it to the finished turtle shown above.



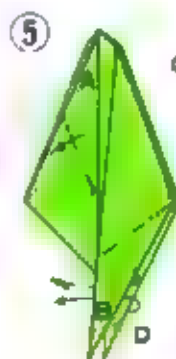
1 Mark mountain and valley folds on a square piece of paper



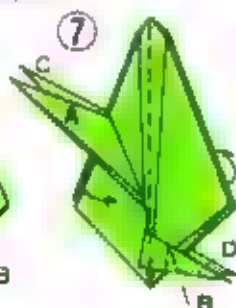
2 Fold A & B to make X (make the underside of the head wider)



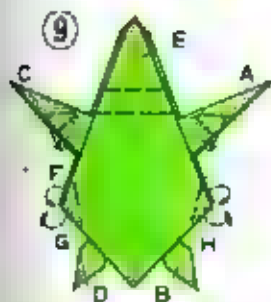
4 A & B should be the same as A and B



5 A & C (behind A) should be folded to match the dotted line. B & D should be the folded inward



8 Bring B & D back to right

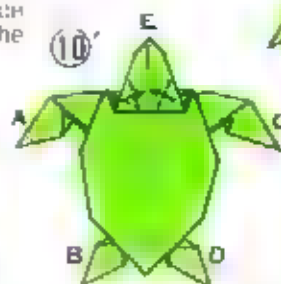


9 Make rear legs out of B & D shown in 8. Bring the left side to right on the surface and right side to left on the back

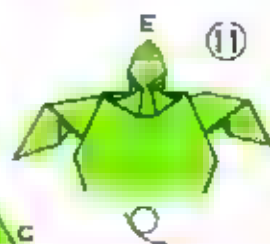


10 Fold F & G & H inward. Open up A and fold it out to the dotted line. Do the same with C. Fold valley and mountain folds to make a pleat on the neck

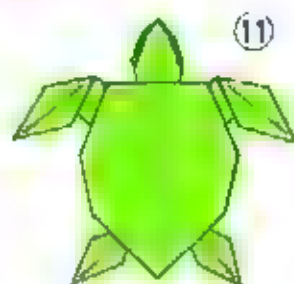
10 Turn over



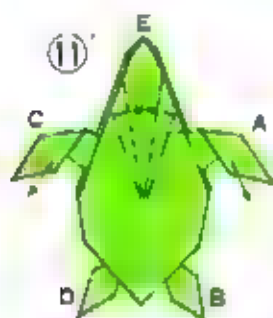
11 Make the neck narrower at the joint as shown



[A] Finish



[B] Finish



14 Follow steps 1-10 of [A]. Then stretch out the neck. Make mountain and valley folds on L



15 Make a pleat on the neck (follow 14 of [A]) to make the neck narrower



BIRD

When the warm sunshine bathes the fresh green leaves, baby birds are here under the watchful eyes of their parents. Even when they're big enough to sit on the branches, they continue to beg for food by fluttering their wings and cheeping noisily.

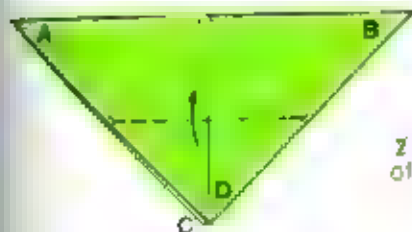
Here, I decided to fold a baby bird like the ones that can be seen in the garden or the woods.

The flying bird will fly very well because of its overall balance.

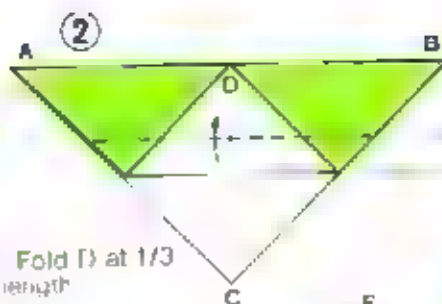
You can make various kinds of birds, such as the fresh warbler, the sparrow, by slightly altering the shape of the beak or the wings. You can make a variety of birds by your choice of paper.

FLYING POSTURE

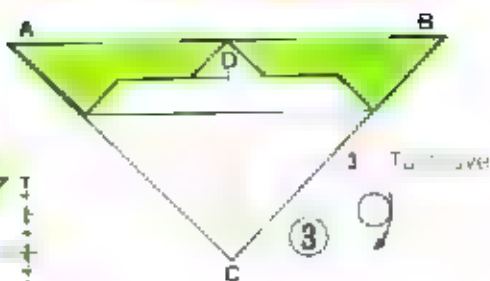
(1)



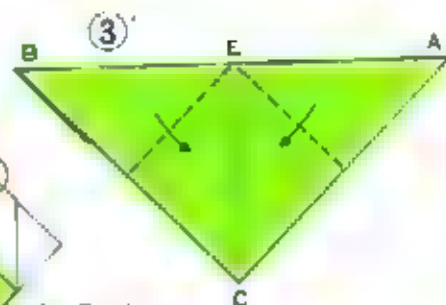
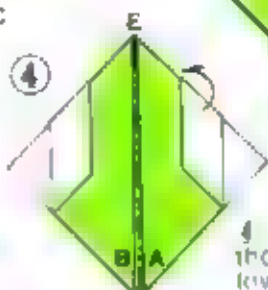
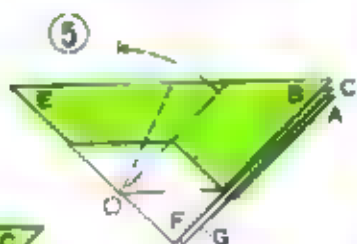
1 Fold B square piece of paper as shown. Fold D upward to the center point.



2 Fold D at 1/3 of length



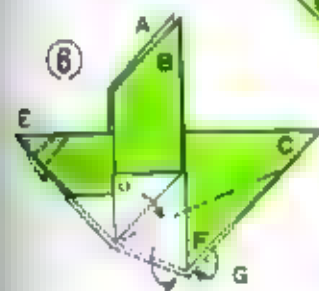
3 Turn over



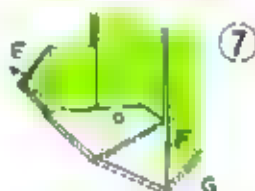
6 Fold at the center forward back

(A)

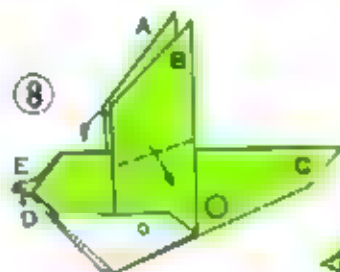
Finish



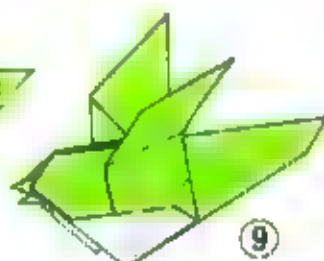
7 With C as the centering point, make mountain and valley folds. Fold B to make E. Turn over and fold A same as B.



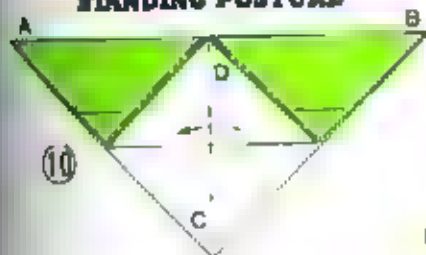
8 Fold E according to mountain and valley folds. Fold F & G inward to put out from part 1 make 1.



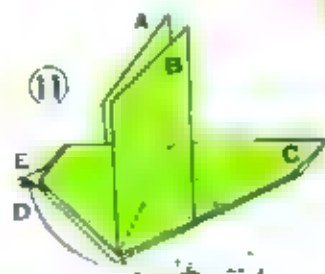
9 Open the part by turning D out of E. Make the valley fold and shape wings. Hold C mark with fingers. Throw to let it fly.



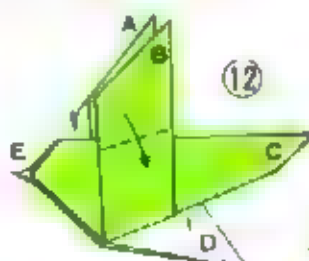
STANDING POSTURE



11 Put D out to the dotted line



12 Follow the steps in the figure (A) up to 11. Without folding 1/3 of D fold on lines to make figure 13.



13 Fold A & B to the valley fold. Fold D in and stand it up.

(B)

Finish





FLYING DOVE (Glider)

Every one does or gets a glider which moves, however, just a take a few seconds to make a and look a glider. Therefore after studying the principle and functional movement of a glider, it is to be made in the shape of a dove. The glider is to not only make a flying dove but to capture its form, rhythm and appear beautiful at the same time.

Both of these glider doves (Figures 2 and 4) fly very well. After you finish folding the shape of a dove you can spread it out in Figure 4 which will make it fly even better. In center of gravity will be close to the base of the wings in the front section and they will only fly if you hold them and throw them as shown in the photograph above.

You will be able to make a variety of flying movements with 2 and 4 because there is a difference in the center of gravity, speed and lift in each one of them.



PENGUIN

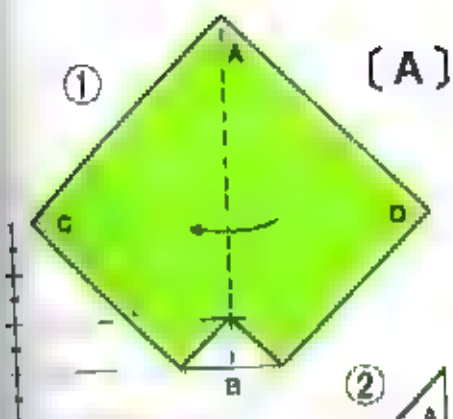
Origami is divided between the types which can be made by everyone and those which especially please young children.

There is a certain uniqueness in origami folded by children even though the pieces may not be very precisely made. It comes easily to them to fold something with a natural theme. Awareness of perceptual constancy, nurtured by repeated folding, helps them absorb scientific and artistic values which will blossom into a spirit of independence.

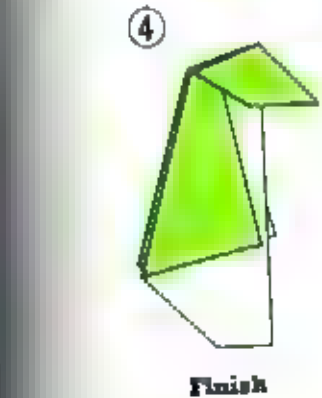
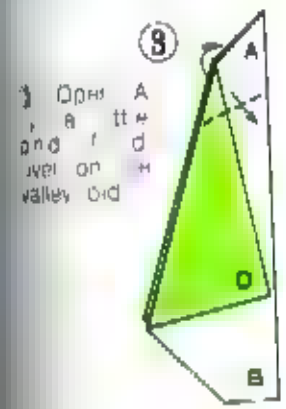
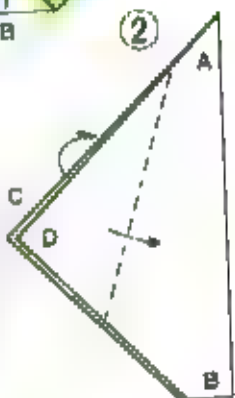
I tried to fold this penguin in a really abstract way and by changing the proportions of the head and wings, you can make penguins with different expressions.

(A) shows how to fold a baby penguin. In (B) folding the section under the wings makes it look more realistic from the head to the back. The straight line from the chest to the feet is strongly accentuated as is shown in diagram 3; if you fold the corner at the bottom right hand side, the whole appearance is spindle shaped which really makes it look like a penguin. In (C) I made the head more true to life. In (D) I made the feet by refolding the part in diagram 3 as illustrated. If you round off the figure from the neck to the chest, as shown in 12, the characteristics of the penguin become more pronounced.

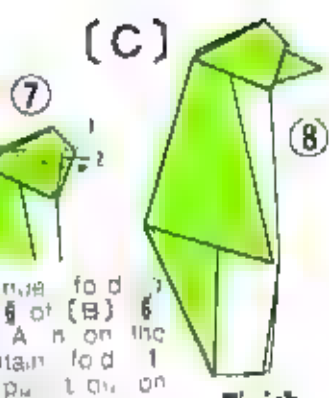
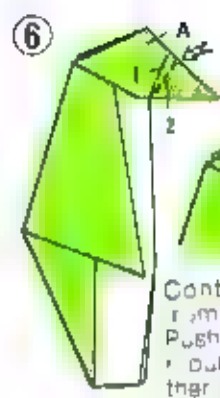
Thus it is possible to express artistic values even in diagrammatic forms. Even if it is designed for children, you can find great art in these simple origami.



1 Make a diagonal crease A-B on a square piece of paper. Fold D along the diagonal line as shown. Bring D over C and fold again in the direction of the arrows.



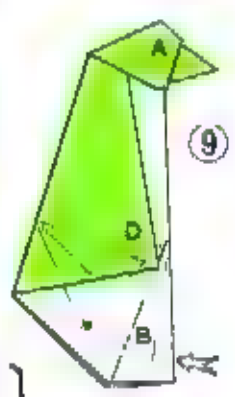
Finish



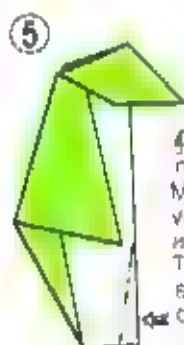
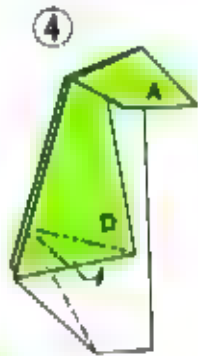
Continue fold from 6 of [B]. Push A in on the mountain fold 1 then pull out on the valley fold 2.

Finish

8 Follow steps to 8 of [C]. Open up B as in the diagram. Fold B in on the mountain fold.



[B]



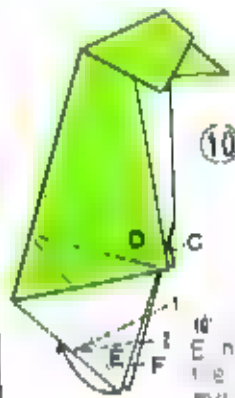
4 Continue folding from 3 of [A]. Make mountain and valley folds on D and C on the back. Then fold D and C as shown in the diagram.

5 Fold inward on the mountain fold.

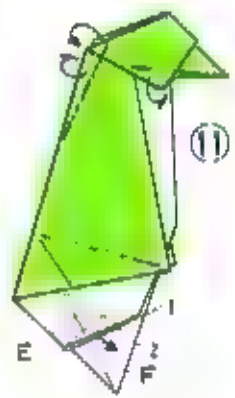


Finish

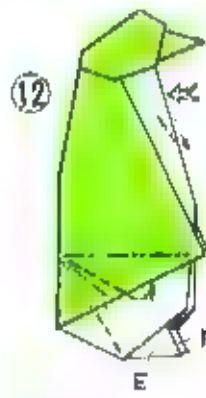
[D]



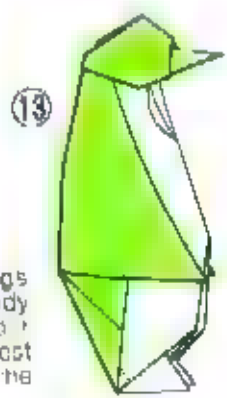
10 Fold E and F in the mountain fold.



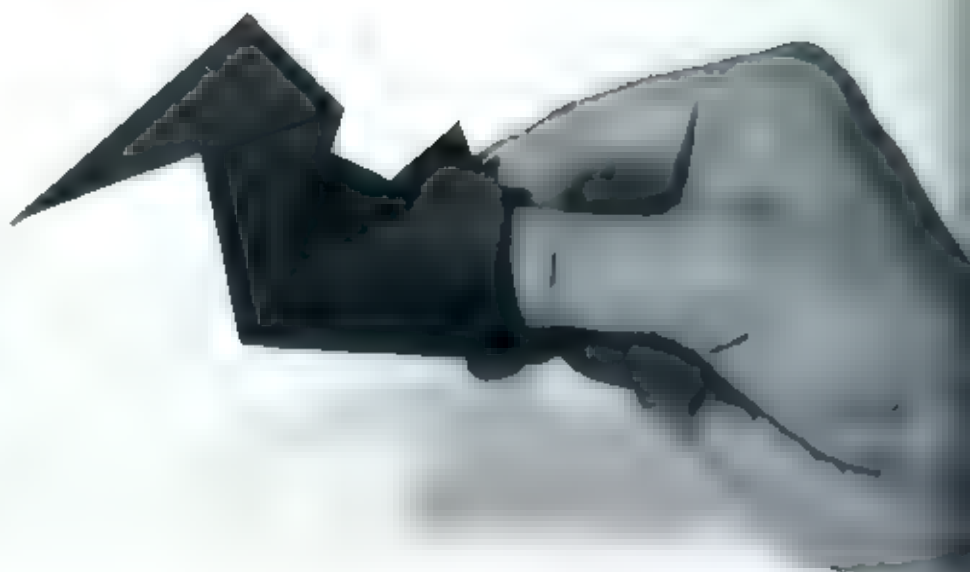
11 Pull out fold E on the dotted line 2 to make a foot. Fold F in the same way to make the other foot.



12 Fold the wings inward. Make the body round by exerting your finger. Push the chest in softly to assume the posture.



Finish



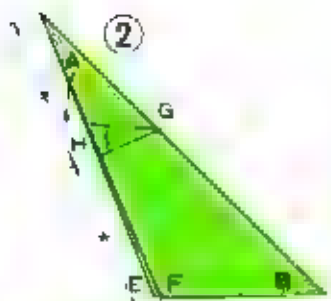
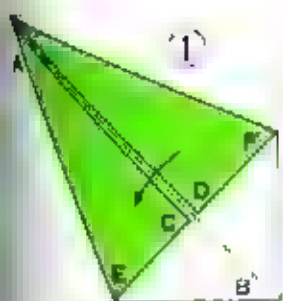
CROW

It is only recently that origami has gained recognition from the standpoint of art and education.

Until now, educational origami consisted of the familiar Orizuru, crane, and balloon which came out exactly the same when folded by anyone. When the International Arts and Crafts Education Conference was held in 1954 under the sponsorship of UNESCO, this traditional type of origami was not accepted as being adequate educational material. Fortunately, I was given an opportunity to explain and demonstrate my theory of Creative Origami with free expression and this was accepted.

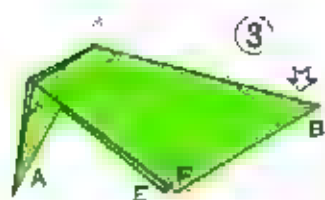
The crow introduced here is folded with a completely new idea. Every angle and fold is well thought out and planned with a sense of beauty and deep feeling. When I fold paper, I try to express not only the beauty of the creatures in nature but also regard them from a scientific point of view. I try to understand basic ideas such as the function and structure of the creatures, the laws of nature and so forth.

In making this crow, it was necessary to take into consideration such things as circular motion, rebound movement and the projected curve of item thrown into the air. Jumping origami like those shown on pages 22 and 23 and the crows here and on the next page are made from the most basic folds. By closing or widening F&F's (B) you can balance the folded crow. It is so fun to adjust the mountain fold line and diagram X and see how it changes the balance between the head and the body.

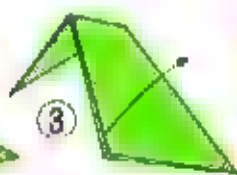
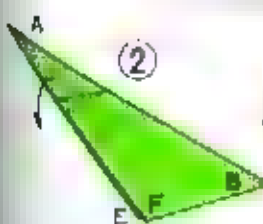


[A]

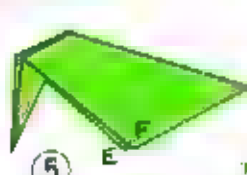
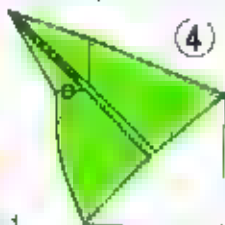
2. Mark G by bringing the tip of A to F. Mark the mountain fold briefly by line A between the sheets.



3. When you press point B with your finger it will move forward.

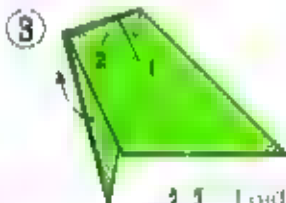
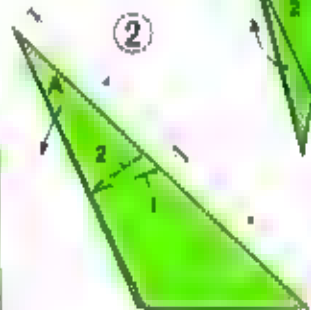
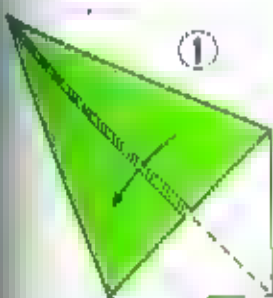


When you teach small children:

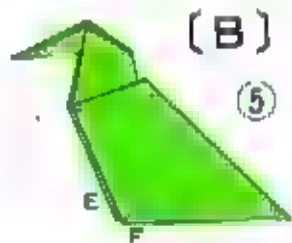


1. Fold A over along the mountain fold up as far as possible. 4. Make the valley fold marked.

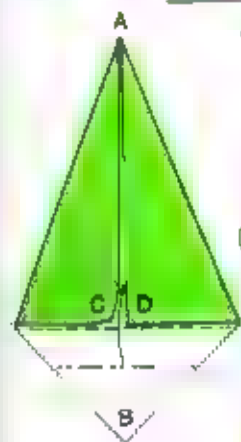
1. Fold on the dotted line shown in 2. The center of gravity moves backward so that it will stand up.



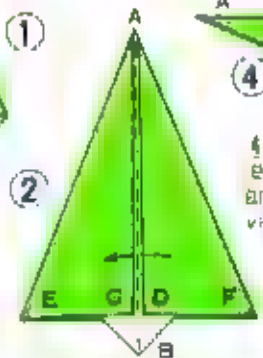
2. Fold A on the mountain fold to 1 and bring it up to the valley fold 2.



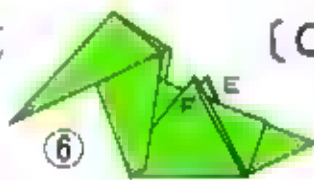
3. When you spread F & F out the center of gravity moves forward so that it will move downward as shown by the dotted line.



3. Fold F & L inward on the valley fold.



4. Fold on the valley fold to open up A and cover over the valley fold.



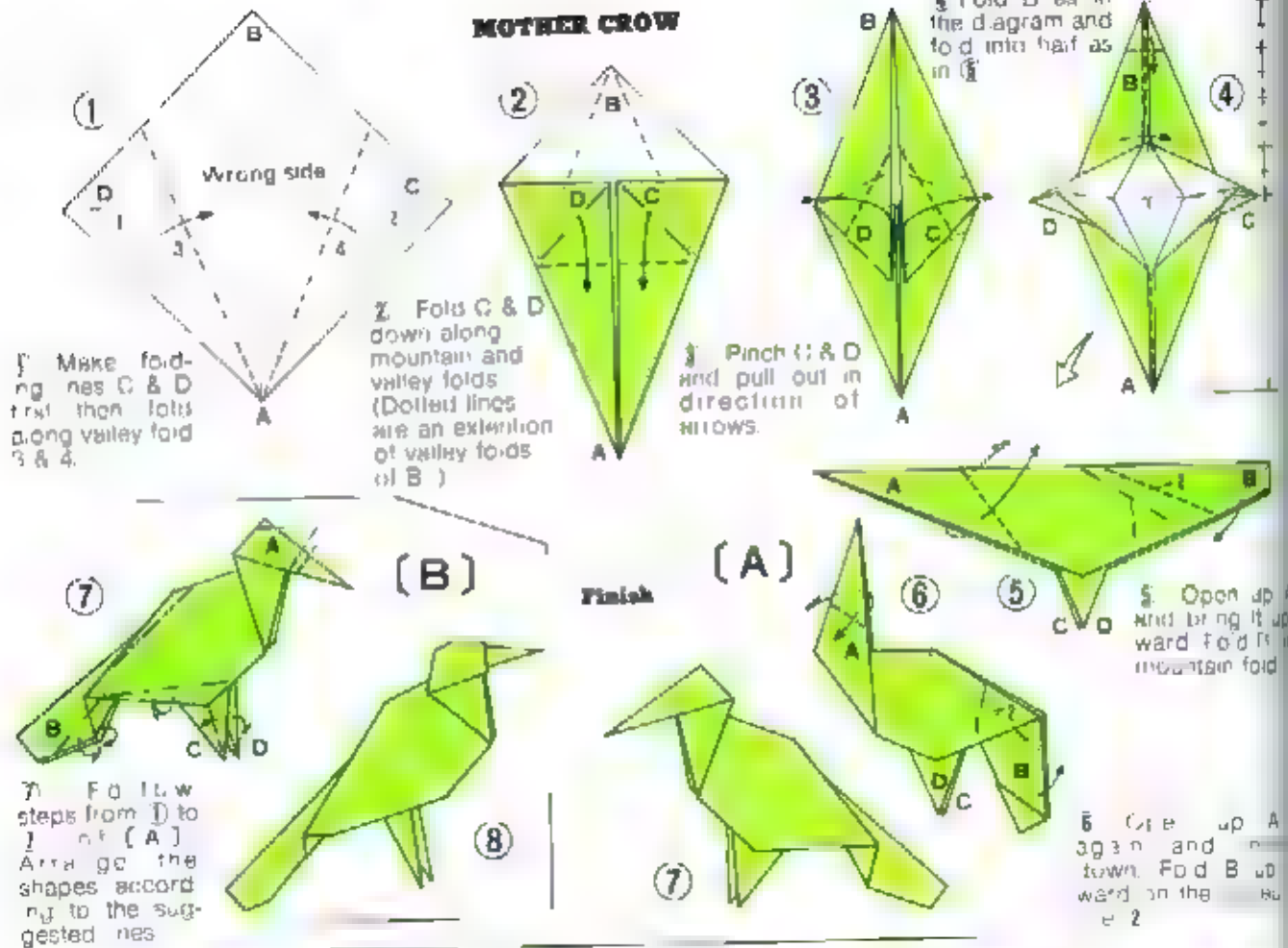
5. If you put your fingers in F & F and move them it looks like the crow is eating something stretching out its neck. If you are right handed you should put your thumb in and your forefinger in F. Support the figure with your middle finger.

Fold a square piece of paper as in 1. Fold B on the mountain fold valley fold. Fold A under A & F.

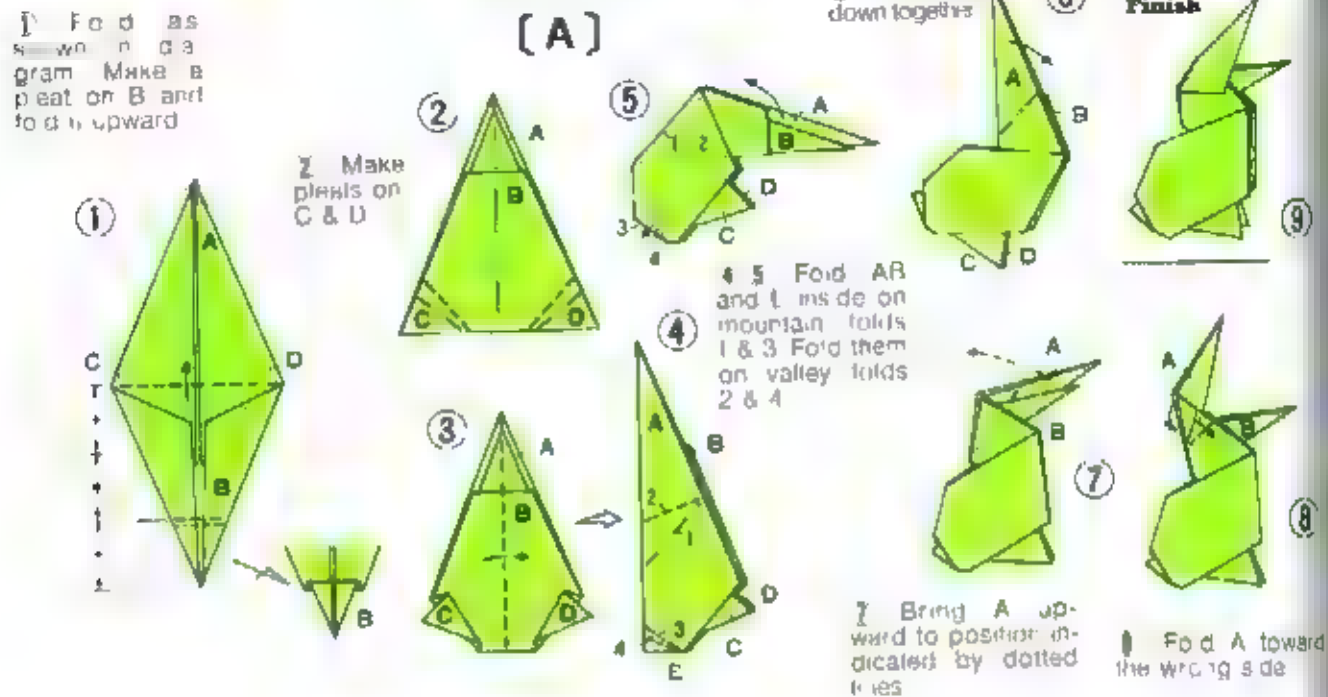
2. Fold F over E.

6. Bring up A again and bring it up as shown by the dotted line to make the head.

MOTHER CROW



BABY CROW





(B)

Finish



MOTHER CROW AND BABIES

Crows have been close to people through the ages.

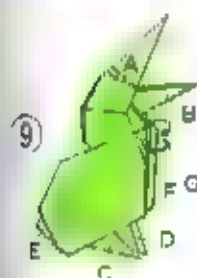
Let's fold a mother crow and some babies. The crows which appeared on the preceding page were folded on the basis of their function, balance and motion.

Although baby crows actually have quite large feet, I have made them small. You can learn a lot about the physique and functions of living creatures by comparing these baby crows with the parent or you add the wings and tail feathers.

Both mother and baby in (A) are folded simply. You can arrange them to look as though the baby is begging for food.

(B) I tried for a more realistic look by making the head round. This technique of accenting the head area will make not only birds but all other animals as well come to life.

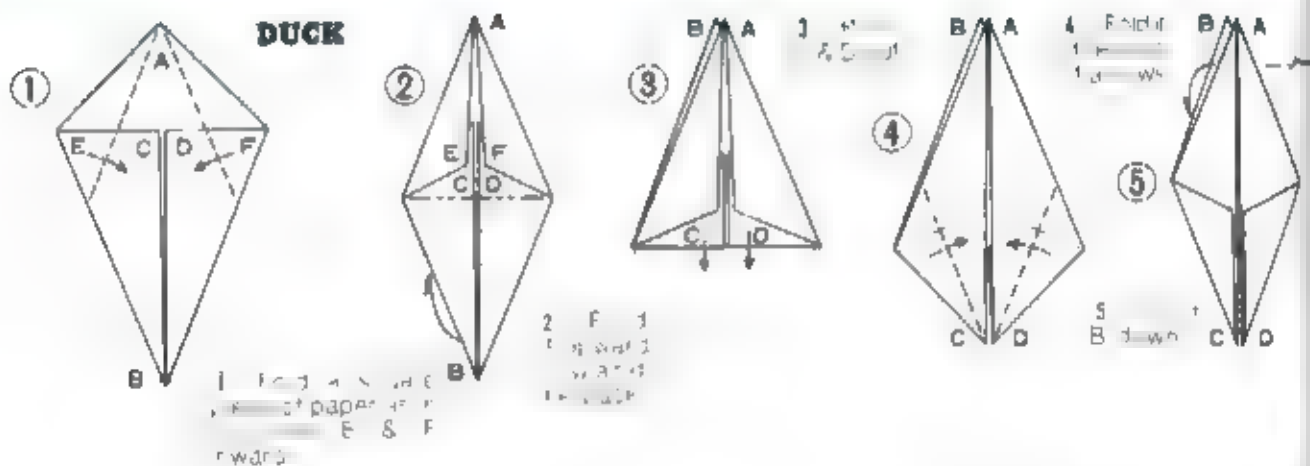
You can choose black, blue or charcoal gray paper. The size of paper for the baby crow is one-fourth the size of that for the mother.



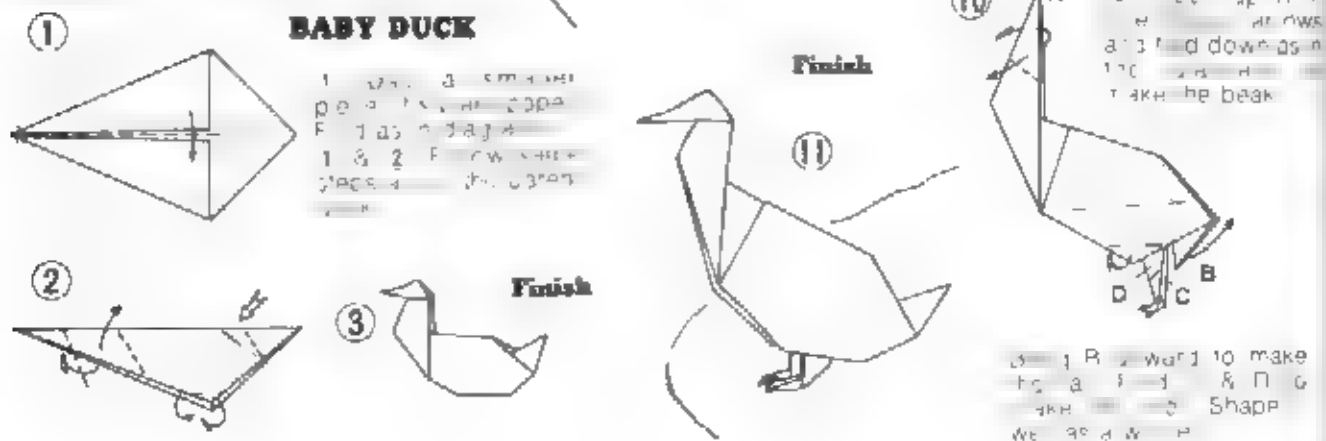
8. Fold wings up on the beak. Fold the neck and bend them narrower.

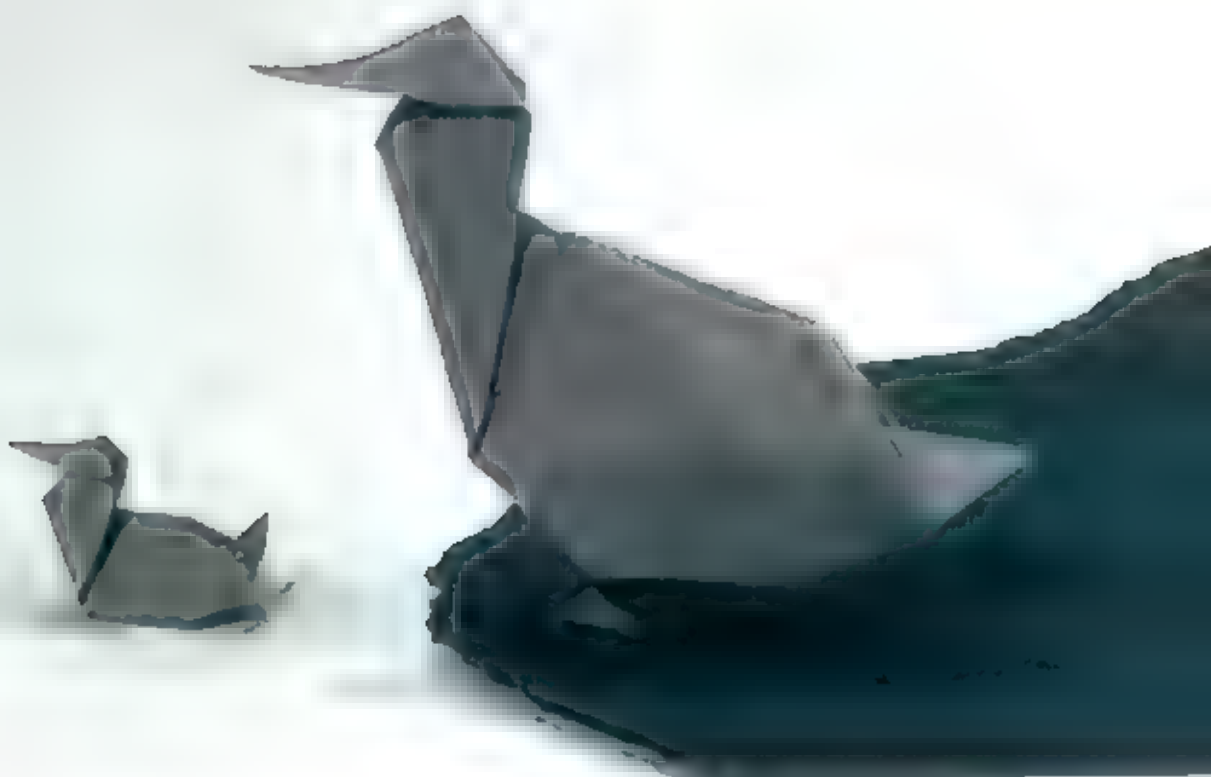


DUCK



BABY DUCK

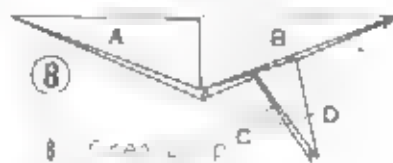




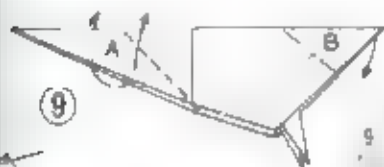
6. Fold into half as shown



7. When the folded paper is flat, fold A & B down



8. Fold C & D up to meet A & B



9. Fold the paper in half again, so that the beak is on the outside

DUCK FAMILY

We'll now fold Mother Duck and her ducklings.

There is something humorous about the way a duck waddles when it walks. By lifting up the back you can capture an innocent expression and folding the feet to the back will make it appear as though the duck is swimming.

When you make the feet as shown in diagram 2, I advise you to fold CD together with the paper in the middle which will enable you to change the feet at any angle and create a family.

The ducklings can be made from paper which is smaller than the size of that used to make the mother.



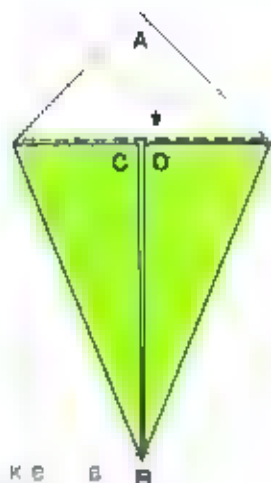
OWL

The wise old owl is a familiar figure. The good old owl is a dead, a flat form and the face is purposefully deformed, sticking out, beak and all.

You can use any kind of paper but try to choose an appropriate color for a owl. You can use either the same color for both body and contrasting color for wings and feet. If you need paper, may also be self-colored, yellow, green or white make the owl very life-like. You may also use in your owl a branch with leaves made from heavy paper or with fancy paper.

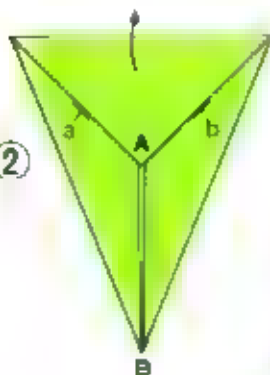
1. Make a diagonal crease AB on a piece of square paper. Fold C & D toward the center and fold A downward.

①



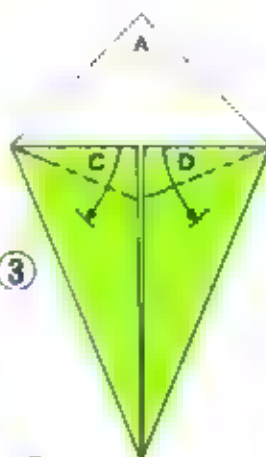
2. Mark a and b with your finger nail. Open up A.

②



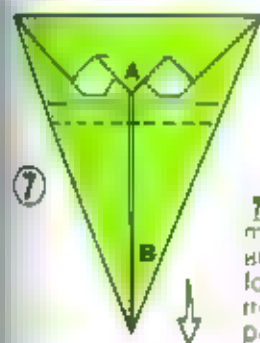
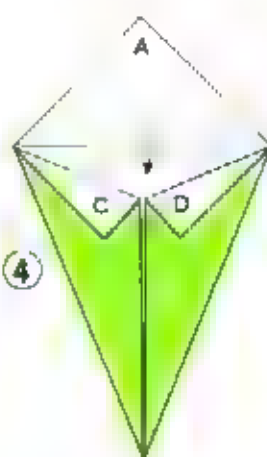
3. Fold C & D as shown.

③

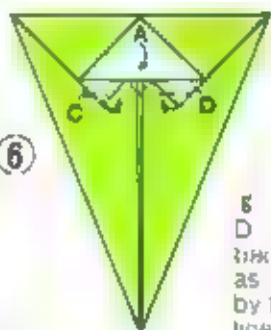


4. Fold A downward.

④

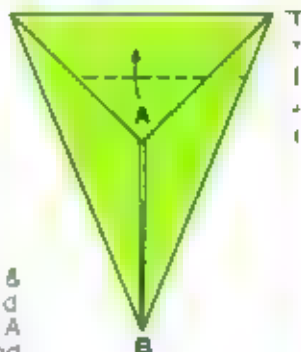


⑥



5. Fold C & D toward the center. Fold A as indicated by the dotted line.

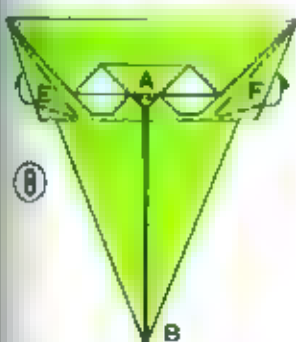
⑤



Finish



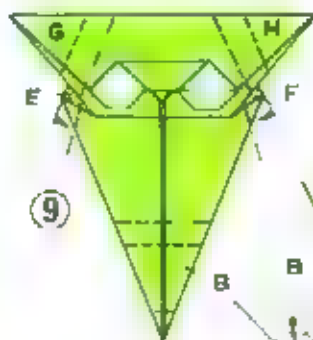
⑫



⑧

6. Make a small pleat on A as shown. Fold E & F along mountain and valley folds in order to make a pleat.

7. Fold E & F backward. Make a pleat on G & H. Fold B as shown in the diagram.



⑨



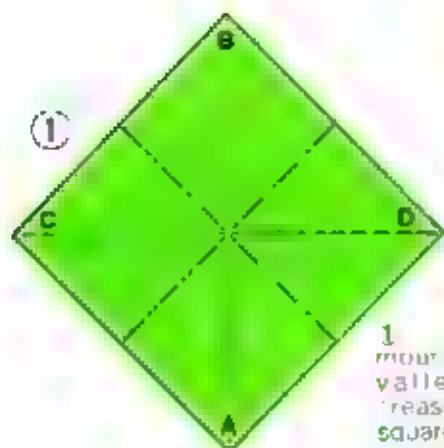
⑩

8. Pinch G & H and make folds. Fold the top of the head backward to make it round. Fold I & J upward.

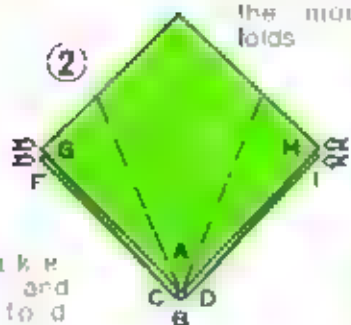


⑪

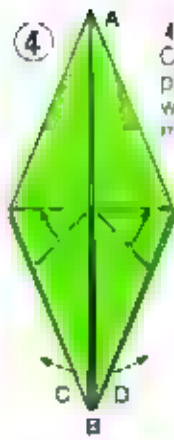
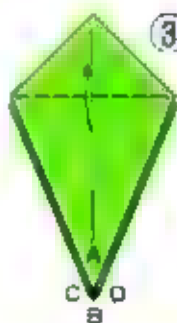
9. Fold I & J down a bit as shown. Fold the central point toward the inside.



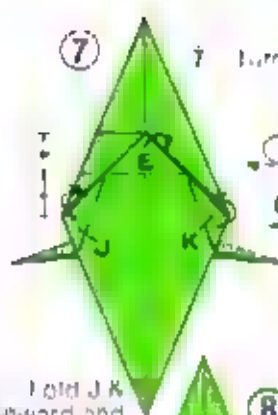
1 Make mountain and valley folds on a square piece of paper as shown. Fold as in 2.



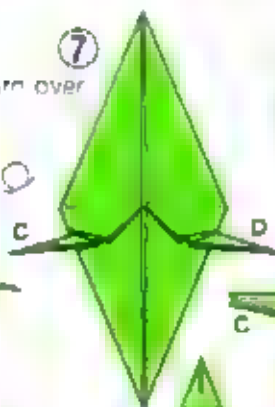
2 Fold F, G, H and I inward on the mountain folds.



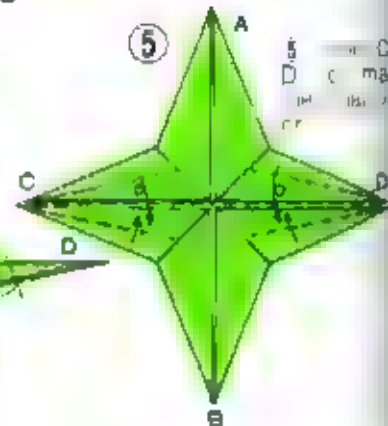
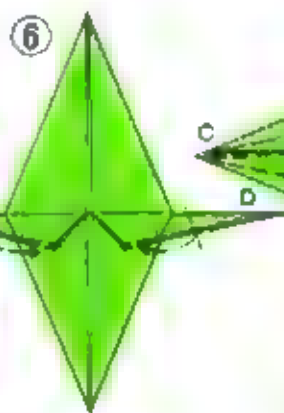
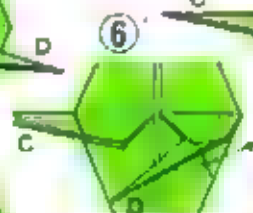
4 Fold C & D inward on the mountain folds. Make 5.



7 Turn over.

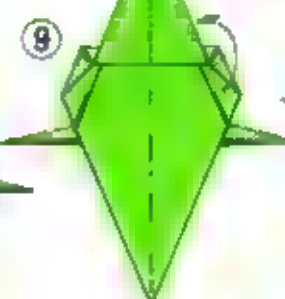
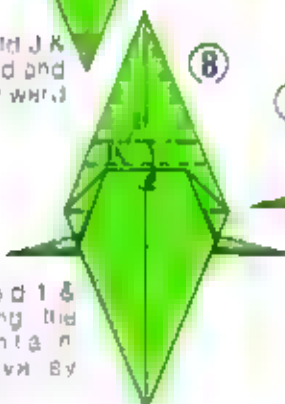


8 Fold C & D as in 5. Make a crease and fold inward as in 7.



5 Fold C & D inward on the mountain folds. Make 6.

7 Fold J, K inward and fold F, G, H, I inward.



10 Fold A up toward dotted lines. Fold B down between L and M.



11 Fold B up again toward dotted lines and fold A on the mountain fold. Try to round off the beak by pulling A upward to position indicated by the dotted line.

6 Fold 1 & 2 along the mountain folds and valley folds.

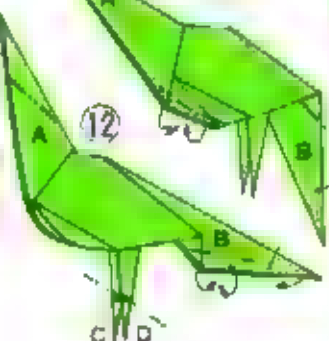
Reference



Smoothed folds for the beak and head.

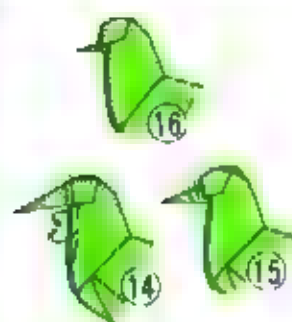


Finish



12 Fold H on the mountain fold. Fold C & D to wing. Fold A on the mountain fold. Make the head by folding A. Following steps 13, 14 and 15.

DOVE



The dove in the photo is made by following steps 14, 15 and 16

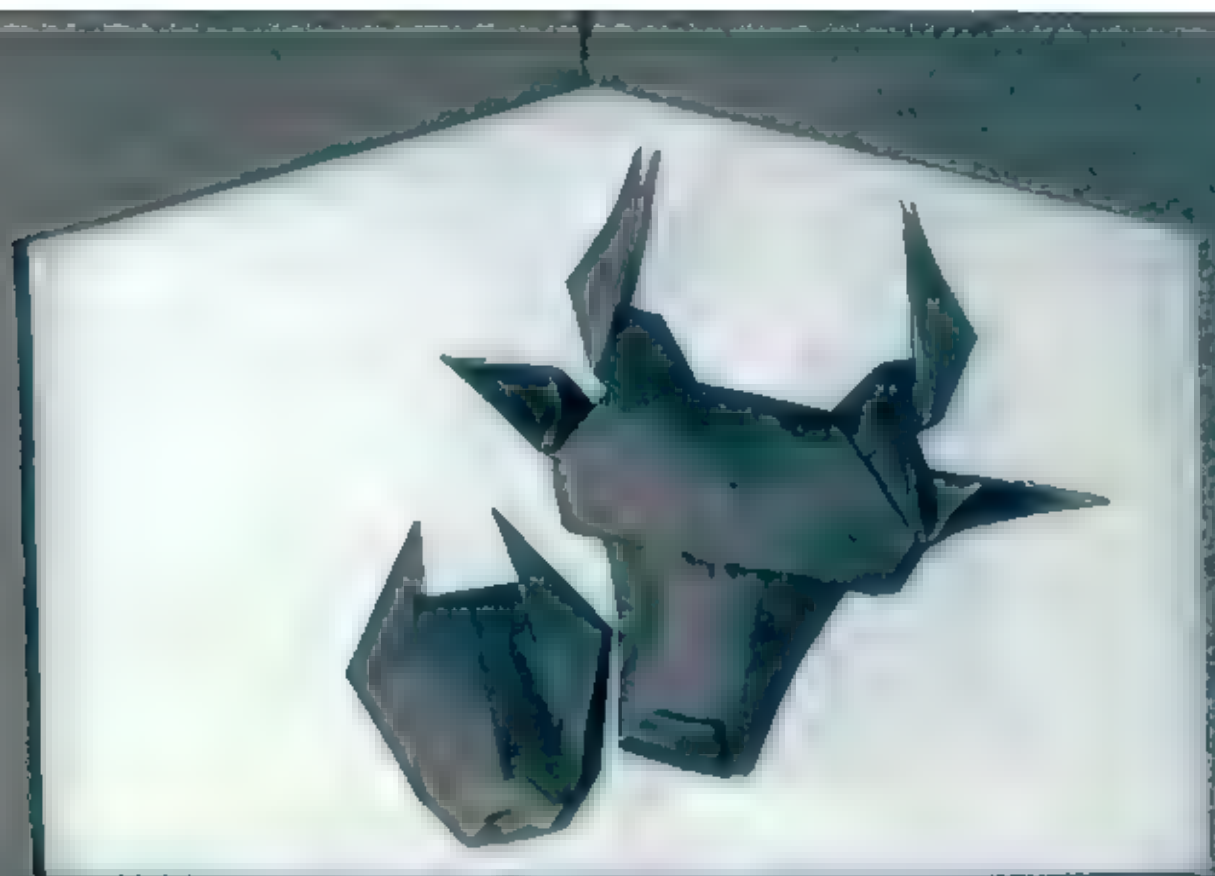
The dove is the symbol of peace and is widely loved. Before making this design, I visited a nearby park to watch the doves. There was always a conspicuous, strong looking boss leading the group. There are many kinds of doves such as the carrier pigeon and the turtle dove which are easy to identify whereas some others may belong to the same species but have distinct body lines.

You can make the different kinds by altering the angles and folding lines as shown here.

Try making doves in different postures as if they are flying or eating.

Folding the Feet





COW

We have known the domesticated cow for a long time.

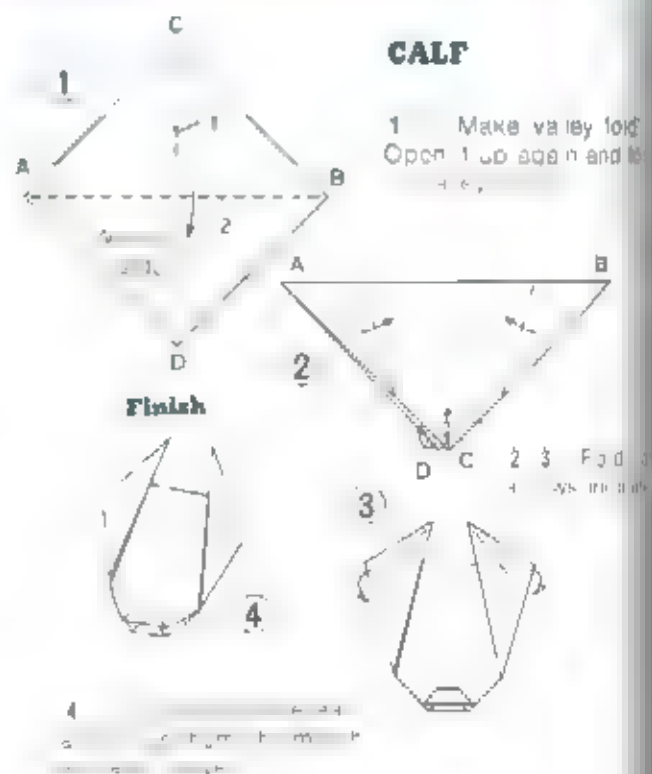
The folding methods in diagrams 1 and 2 can be varied by making adjustments in the angle and size from the ridge.

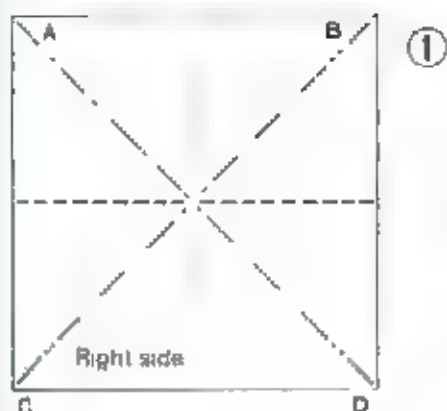
Here the folding is done to capture the characteristics of the cow by presenting only its head. Using photographs for reference, you should be able to fold other types such as the water buffalo, the African and the wild cow.

Choose your paper to match the color of the cow. The size of the calf should be one third that required for the cow.

CALF

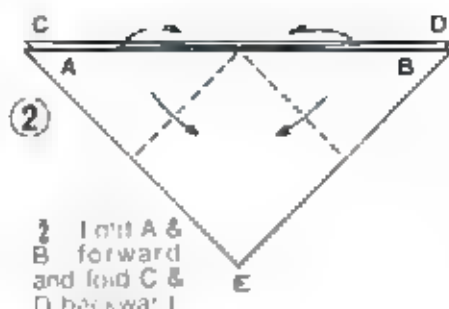
1. Make valley fold. Open 1 up again and fold 1 over.





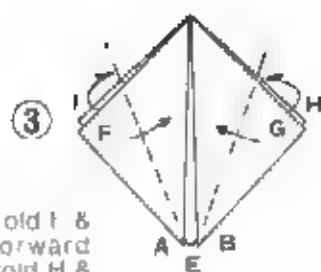
①

COW



②

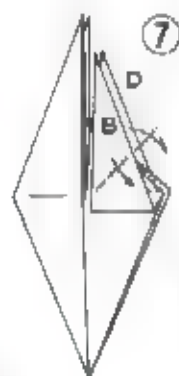
2 Fold A & B forward and fold C & D backward



③

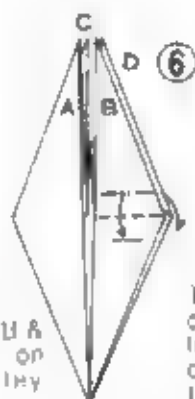
3 Fold C & D forward and fold A & B backward

1 Mark mountain and valley folds on a piece of square paper as shown. Fold it to make 2



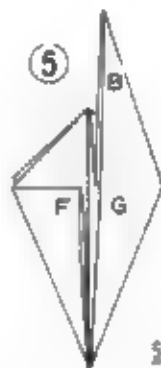
④

4 Fold C & D down on the valley folds



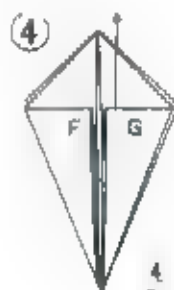
⑤

5 Fold B on the valley fold and then on the mountain fold. Fold D the same as B



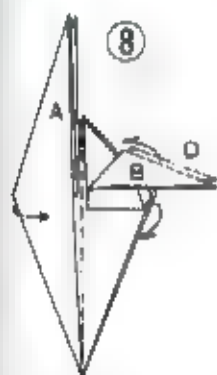
⑥

6 Pull A, C and D out in the same way as B



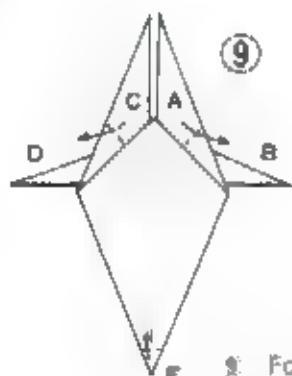
⑦

7 Pull B out of the back of G



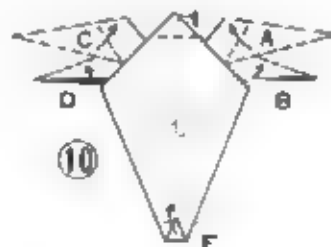
⑧

8 Turn A over B and D over C to make 9



⑨

9 Fold A & C as arrows indicate



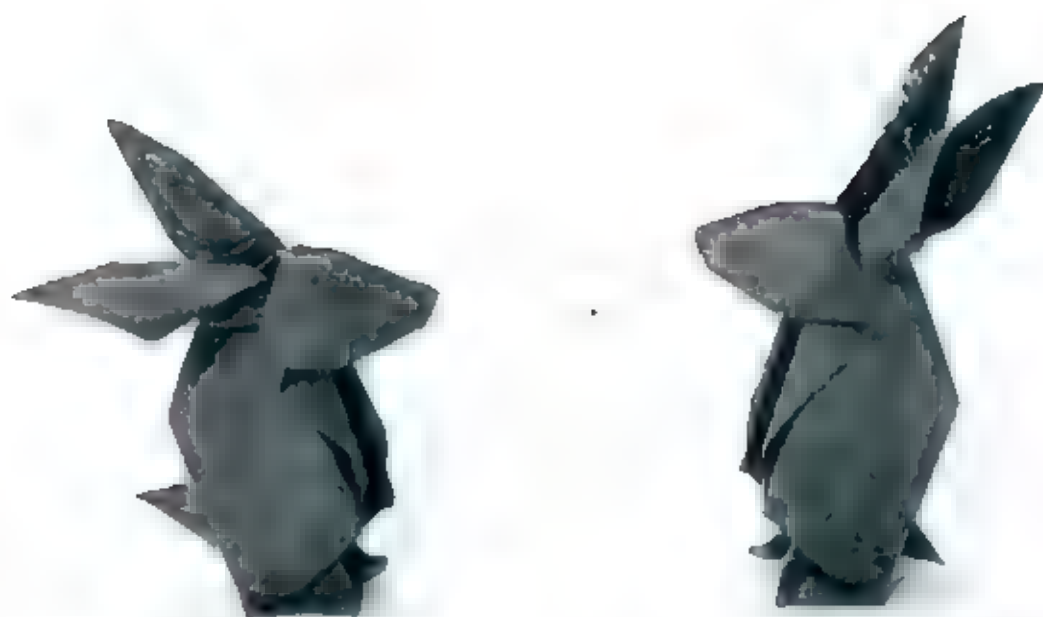
⑩

10 Make a pleat at eye level. Fold E to make the nose and A & C as shown to make the horns. Open up B & D to make the ears. Finally fold the top of the head backward and arrange the face as a whole



⑪

Finish

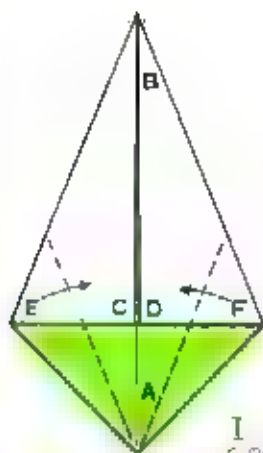


RABBIT

The rabbit is one of the cutest animals. It appears in many legends and fairy tales and it was from such a story that I got the idea to make this rabbit standing erect with its ears pointing upwards.

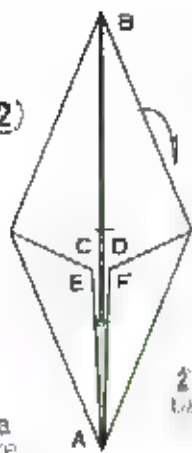
The ears of some wild rabbits become white in the winter. Here I used a piece of pink paper with a white back. The white side was used to make the body and the pink appears as the inside of the rabbit's ears as illustrated in diagram 13. If you skip the steps from 5 to 8, leaving C and D as it is, you will come up with a rabbit with bigger ears.

①

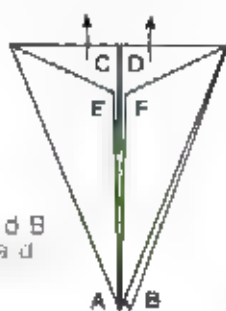


I Fold a piece of square paper as in I

②

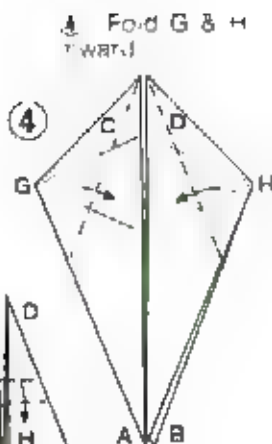


③

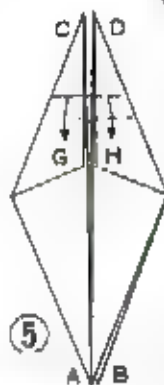


2 Fold B back ward

④

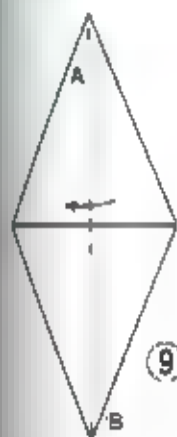


4 Fold G & H toward



5 Fold G & H on mountain and valley folds to make a boat

3 Fold in the direction of the arrow



1 Bring A up



⑦



6 Open up as in 7 Fold C & D inside 1st and cover C & D from the sides as in 8

⑥



8 Open up A at the valley fold in the arrow and fold B down between them



⑩

9 Fold A over on the valley fold Fold B up on the mountain fold



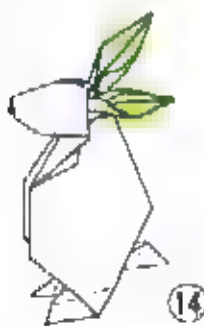
⑪

10 Fold A & B on 1st mountain fold and feet



⑫

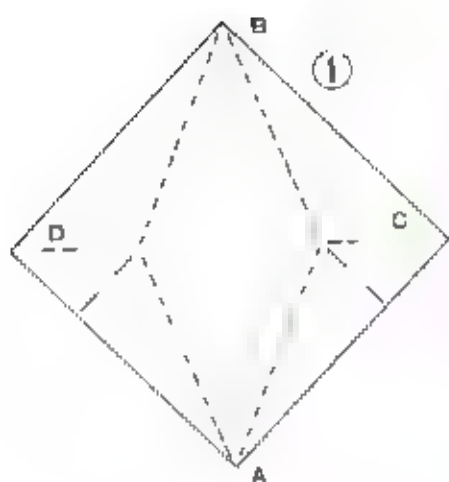
Finish



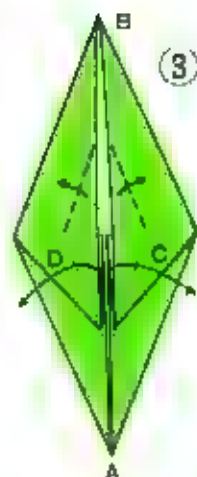
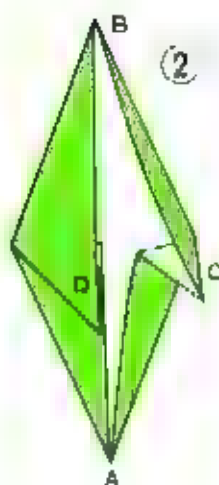
⑬



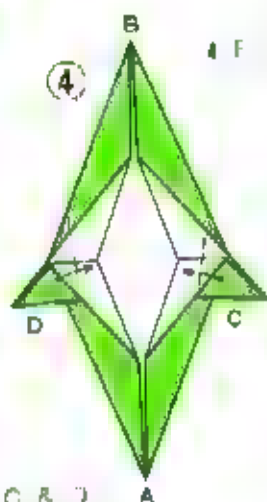
11 Put A gently and fold corners. Open up the ears and shape them. Open up the end of the tail and twist it and spread the feet out and let the rabbit stand



1 Make a diagonal crease AB
in a square piece of paper.
Make valley folds along the
diagonal creases Fold C & D as in
2



3 Pinch C & D
Open up C & D by
stretching them a bit



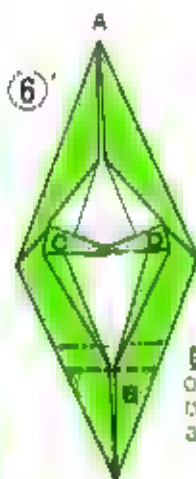
4 Fold C & D



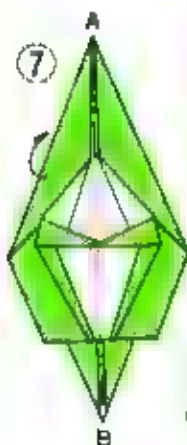
5 Fold C & D
Close the mountain
and valley to is
to make them
narrower



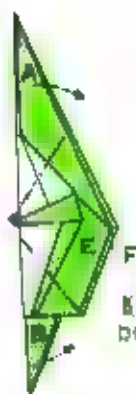
6 Turn
around and
bring A to
the top



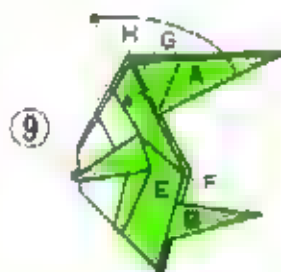
6' Make a valley
on B by folding
the mountain
and valley to is



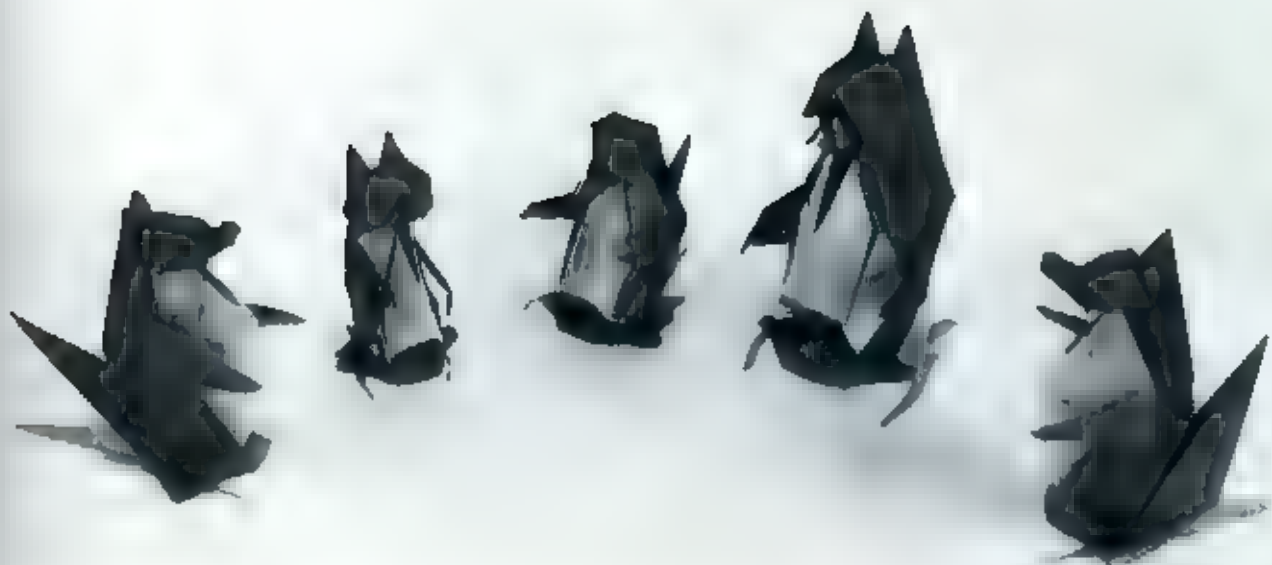
7 Fold back on
the center
mountain fold



8 Fold both A & B
between E & F



9 Pinch A and fold 1 between
G & H on the mountain and
valley to is to make 10



RACCOON, The Drummer

Let's fold the raccoon, which is so well known from Japanese fairy tales and old folk songs.

Take a piece of brown paper which is white on the back. It should be folded so that the white side appears on the stomach and chest. Pushing the tail upwards will give it the posture of the raccoon shown on the right.

After folding it, you can hold the figure by the neck and insert your finger from the back pushing to make the stomach more rotund. By pulling A from the inside of diagram (13) you can make the face rounder and this will make it look even more like a raccoon.



11. Open A in direction of arrows and bring down.



12. Flatten A. Make a pleat at the eye level. Flatten the tail. Make the nose point down. Flatten the feet to make the feet look round. Shape the belly to look round.

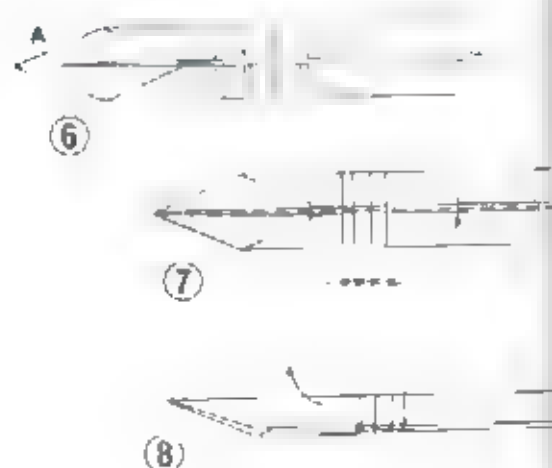
Finish



SNAKE



Reference



There are not many people who like snakes. I tried to make those snakes more lovable by adopting the familiar, simple form of local toys.

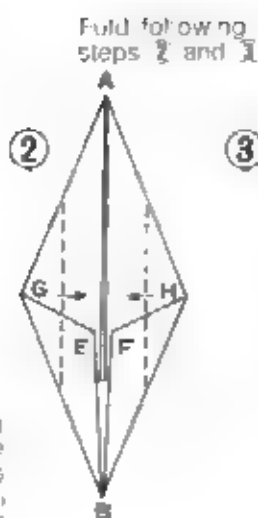
Mercury, the Roman god of commerce and science, carries a caduceus, a staff entwined with two snakes, and in Japan, snakes are also painted on votive tablets for good luck in business.

I usually choose a color that matches the animal or object I am making. However, in the case of these snakes, I deliberately chose a different color in order to give them a feeling of being toys.

In the upper photograph, I folded the part between the head and the abdomen into two and gently piled the neck up and wound the section from the abdomen to the tail around my finger. (See reference.)



1 Fold a square piece of paper as in 1. Then fold E & F in direction of arrows.



Fold following steps 2 and 3

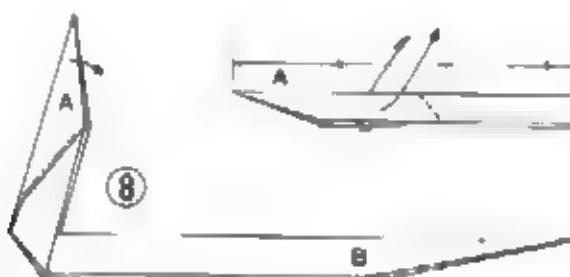


4.5 Fold B on valley lines. Then do the part inward as arrows indicate to make 5.

5 Fold at the center to make a long narrow body.



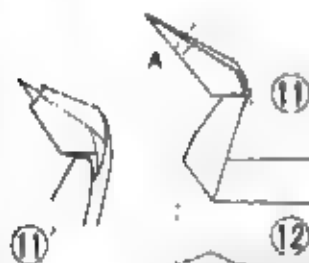
9 Fold A on the mountain to 10.



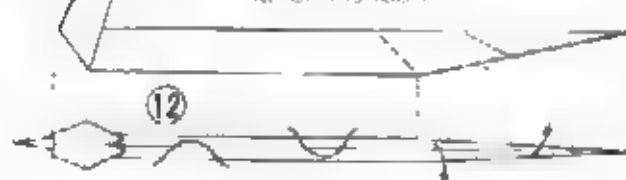
7 Open and fold A down 1/3 of the angle.

8 Fold A between sheets.

10 Fold over along the valley to 11.



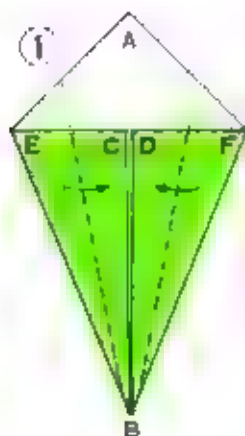
11 Make a pleat on A, then fold the tip narrower to make the tongue. Fold diagonal mountain lines in order to make the tail lie flat on the table.



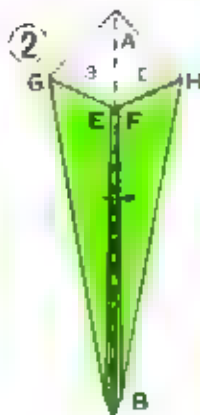
12 You can curve the tail as you wish to make your snake look more alive.



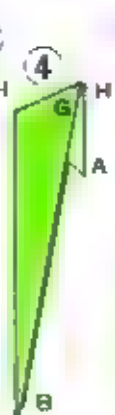
Finish



1 Mark diagonals AB. Fold C & D first and then fold E & F



2 Fold A along lines a & b

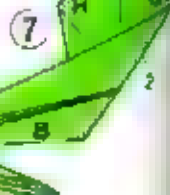
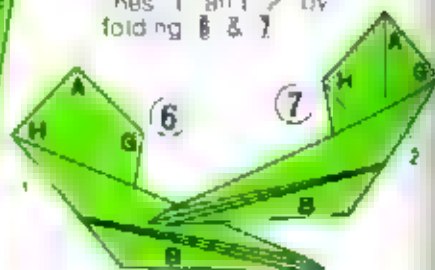


4 Open up 4 to make 5



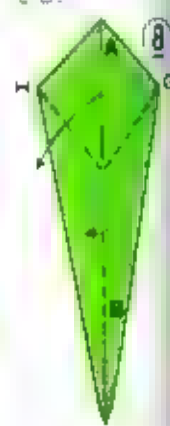
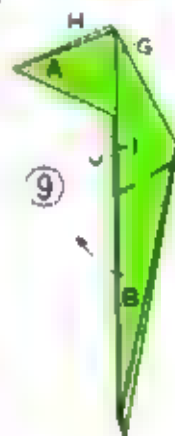
(Back of 2)

5 Make valley lines 1 and 2 by folding 6 & 7

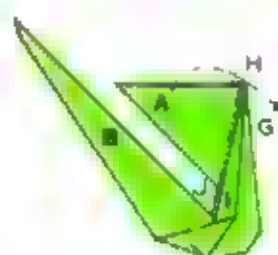


7 Fold on mountain line and valley line to do

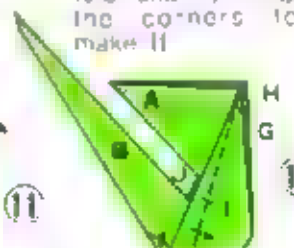
8 Fold B between 1 & 2



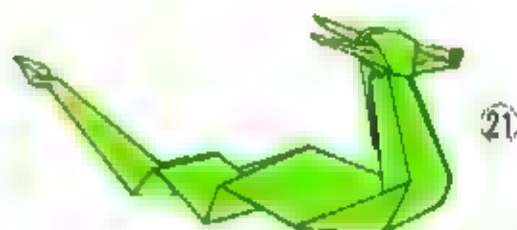
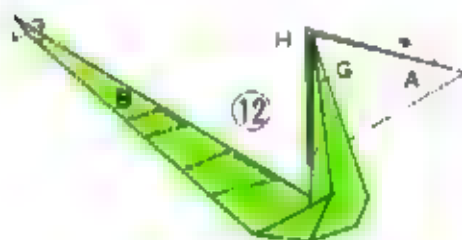
11 Push A between G & H in the direction of the arrow



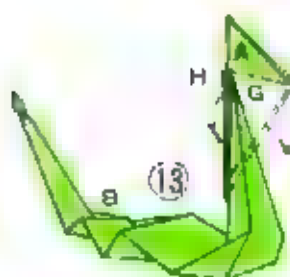
12 Fold 1 & 2 along the valley fold and open up the corners to make 11



12 Push A upward on the mountain fold. Open up the body and fold as shown



Finish



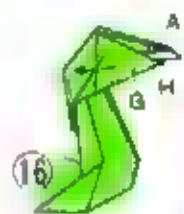
13 Bring G & H over the part of the head to make 14



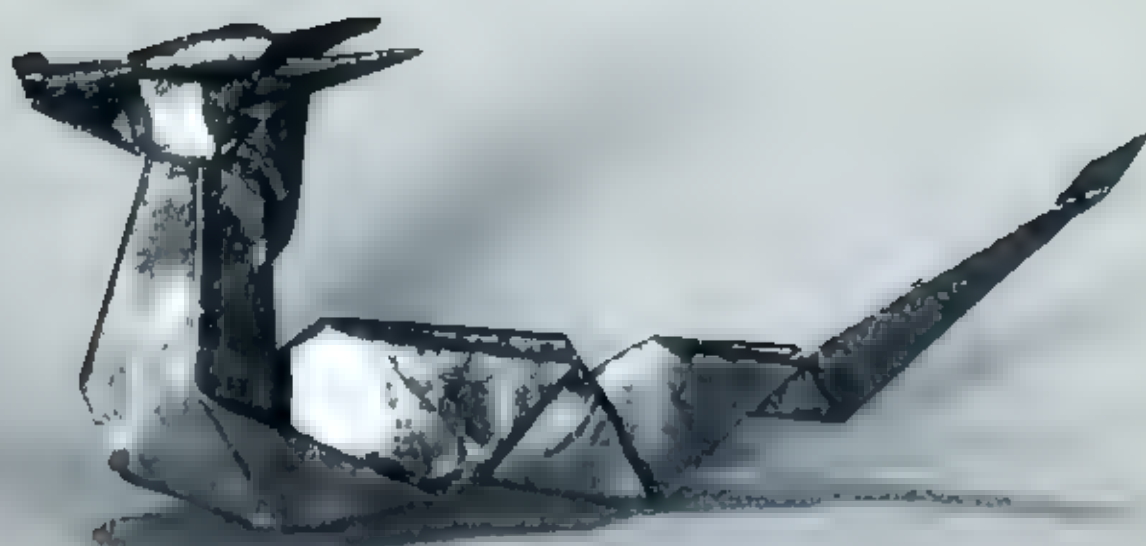
14 Fold A between the sheets



15 Fold the pointed part in as the arrows indicate to make 16



16 Fold G in the direction of the arrow. Turn over and fold H the same as G



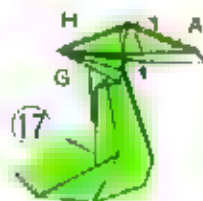
20 Fold the top of the head down to meet the bottom of the head. The head is now complete.



19 Make the top of the head into a point by folding the top of the head down to meet the bottom of the head.



18 Fold the top of the head down to meet the bottom of the head. The head is now complete.



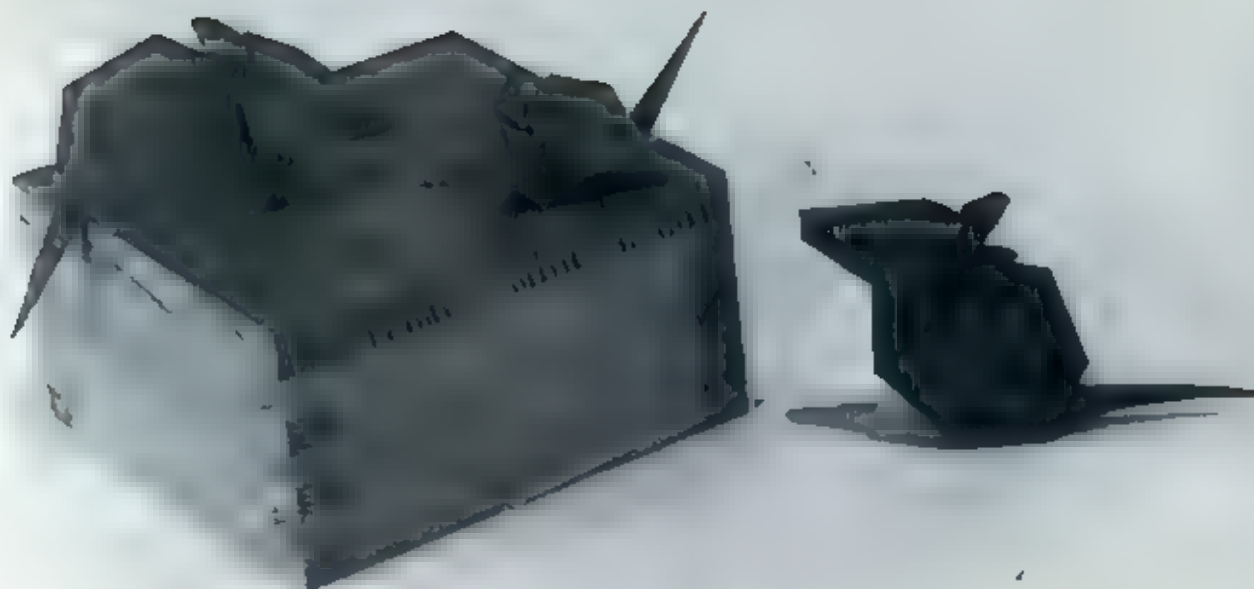
17 Fold the top of the head down to meet the bottom of the head. The head is now complete.

DRAGON

Among the twelve animals in the Japanese zodiac, only the dragon is a fictional one. However, unlike many of the popular monsters of the present day, it is a refined creature.

In Japan, sculptured dragons are frequently seen in the decorations of shrines. They appear in folk tales as the god of the sea or the dragon god. It is also said that dragons can summon the rain clouds and therefore, they are believed to be the guardian deity of wooden buildings.

In folding this animal, it is important to clearly define the horns and mane. Try to give it an appearance of dignity by adjusting the angle between the face and the neck.

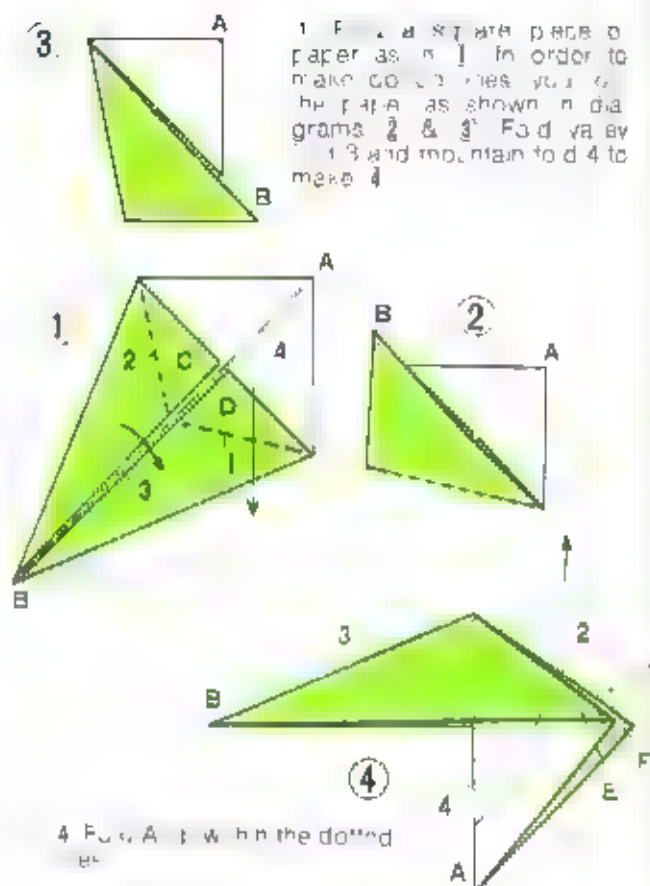


MOUSE

It is very easy to become enthusiastic about origami because it is so simple to do. I would like to state the importance of origami from the point of view of the creative arts.

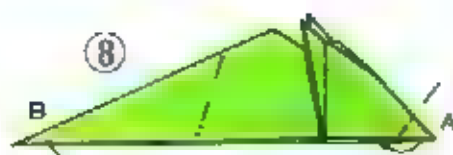
When we think about origami for children, there are two kinds: origami that adults do and give to children and the kind that they can fold themselves by following diagrams. The ideal size of paper in either case should be 12 cm X 12 cm (7 in X 7 in). If the paper is larger than this, it becomes difficult to handle. When you teach children to fold origami, you should sit next to them so that they can see your hands instead of a thing in front of them. Generally speaking, however, a 15 cm X 15 cm square sheet of paper is recommended. It should be about the same thickness as a piece of stationery. When you have learned to fold an object with a small piece of paper, it is quite easy to do the same with a larger sheet.

3. Fold a square piece of paper as in 1. In order to make 60, 30 times you fold the paper as shown in diagrams 2 & 3. Fold vertically in 1, 3 and mountain fold 4 to make 4.

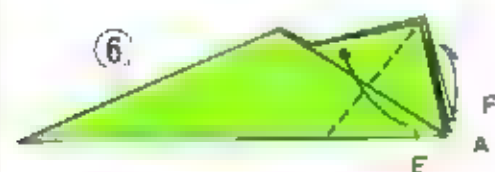




7 Open up E & F and fold over both sides to make the fish.



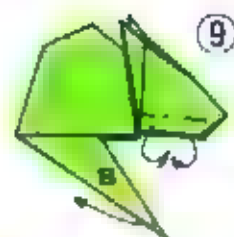
8 Fold the tip of A inward and B down on the mountain fold.



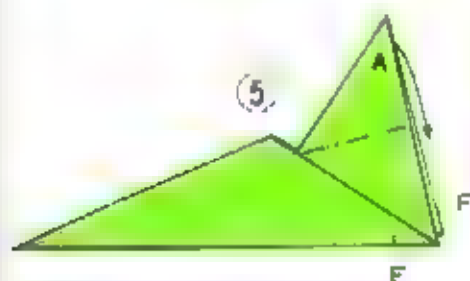
9 Fold E upward on the valley fold and F same as E.



10 Make the tail narrower and pull up the ears. Round the body by cutting your finger inside it.



11 Fold the lower part of the face on the mountain fold. Fold it inward to make the head.



12 Bring A down between E & F.

Finish

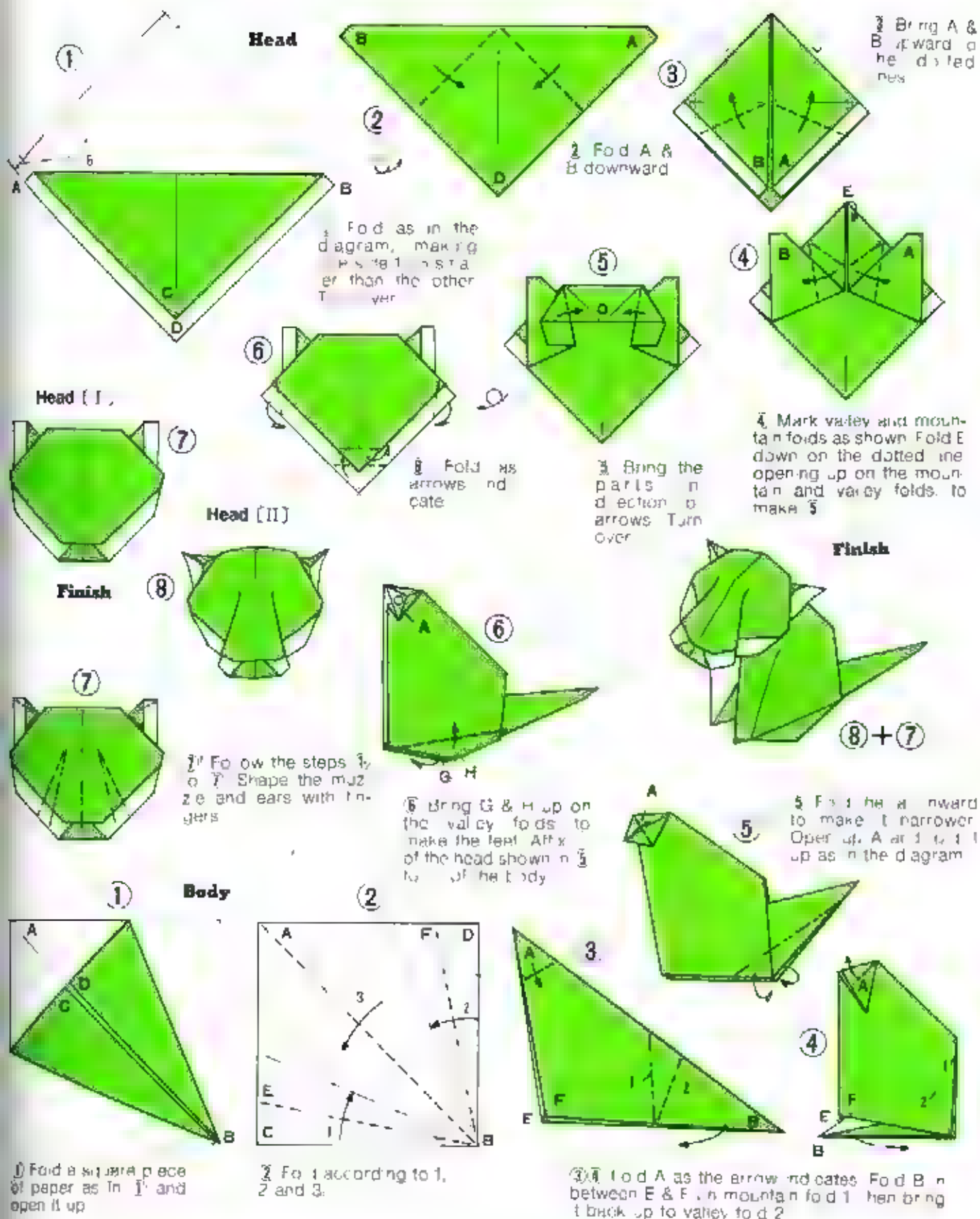


13 You can make various kind of mask by changing the angles of the tails and heads or by the nose.

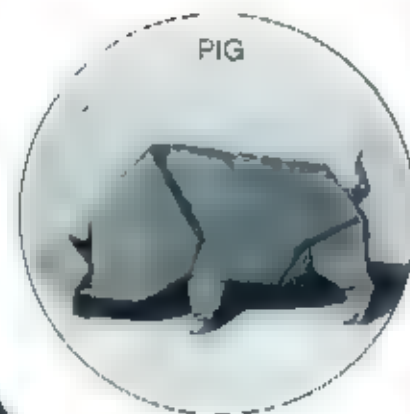
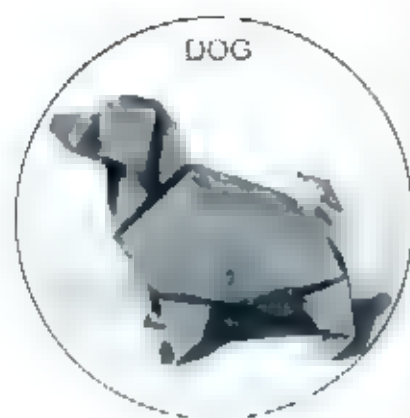


TIGER

The sculpture is a white, abstract, geometric form, possibly a sculpture of a tiger, set against a dark teal background. The sculpture is composed of several sharp, angular, and interconnected white volumes. A prominent, elongated, pointed structure extends from the right side of the main body. The lighting is dramatic, highlighting the sharp edges and creating deep shadows within the recessed areas of the sculpture.



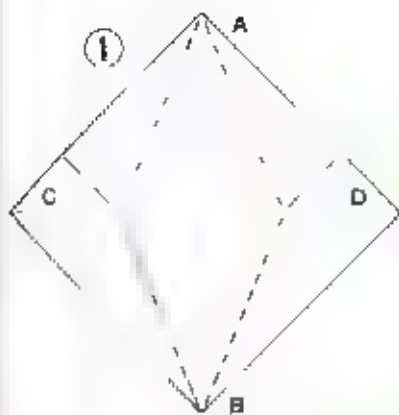
GIRAFFE



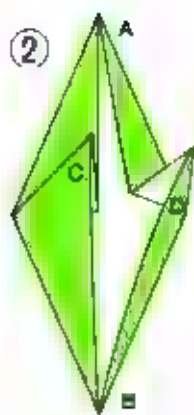
Let us now fold a long-necked giraffe

Just as you should make many sketches of animals you plan to paint or carve, it is important to make many folds of paper when folding origami, because you then become familiar with the physique and posture. The study of healthy animals (to avoid mistakes) with their characteristics is a vital step, enabling one to capture them in origami.

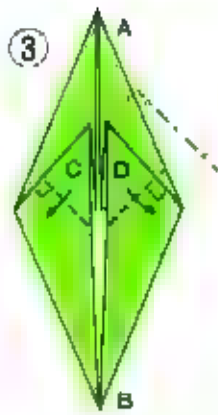
Here is one of the 3,000 and 30,000-fold origami varieties. After you have mastered it, you can work on the paper structure and modeling to make the object more lifelike. You can also fold other animals like the ones shown above.



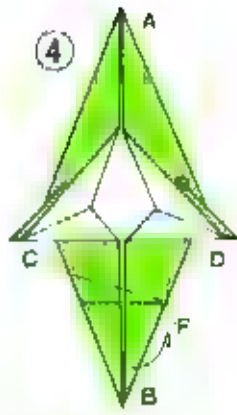
1. 2. Make the diagonal crease AB on a square piece of paper. Make the other creases by following the diagonal line. Bring together the corners as shown.



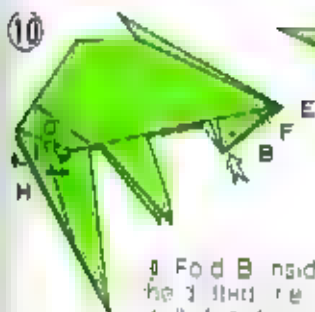
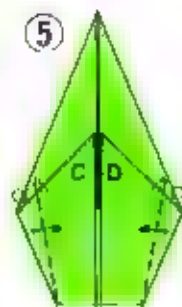
3. Make valley folds as shown and open C & D. Arrows indicate.



4. Bring B to C to make a valley fold. Fold B back ward on the mountain fold. Bring C & D up.



5. Fold C & D inward on the valley folds.



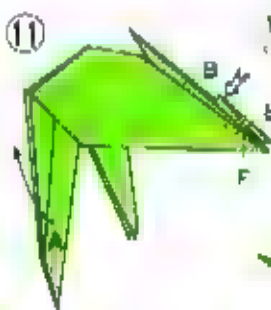
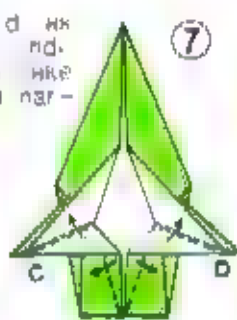
8. Fold B inside to the valley fold. Fold C & D outward on the valley fold. Fold C & D inward as the arrows indicate.



9. On the mountain fold, fold A & B down between the sheets.



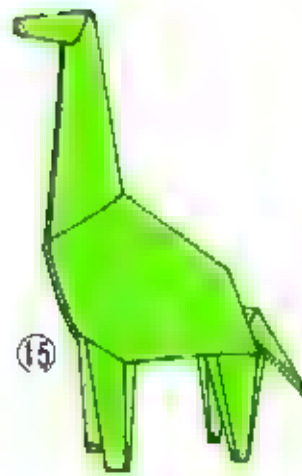
7. Fold the mountain fold. Arrows indicate the next steps.



11. Bring A up to the valley fold line.



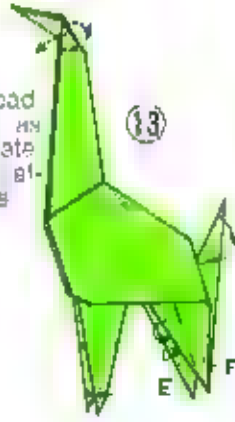
12. Fold A to the mountain fold as the arrow indicates. Put the index finger on the side of C. Support the other side of the body with your middle finger and push them out on the front of the body. Then with your right hand, push E & F in the direction of the arrow.



Finish

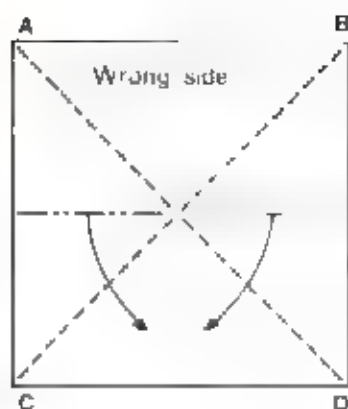


14. Fold head forward and shape the head as a whole.

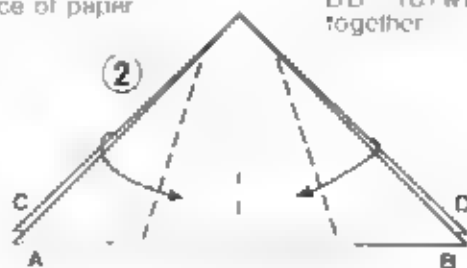




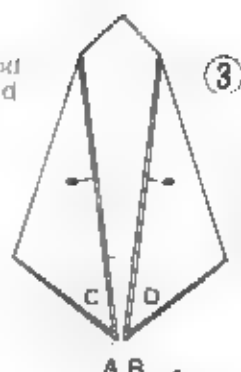
GORILLA



1 Make valley and mountain folds as shown on a square piece of paper.



2 Fold AC and
BD forward
together



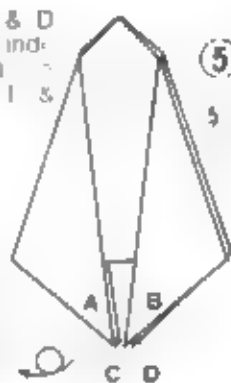
§ Sp 111 (C & T)
out as in § Put
C under A 111 (C)
1er 1



A TOP SECRET

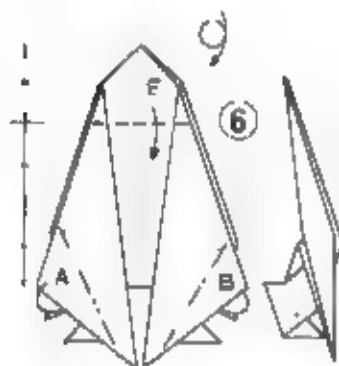
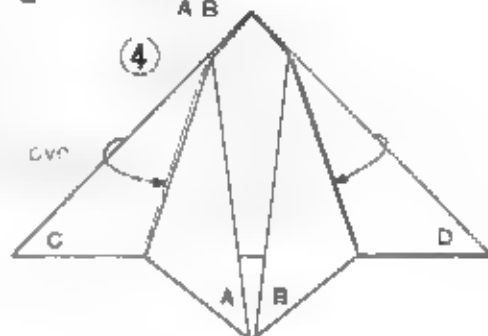


5. Fold C & D as arrows indicate. Fold corners of E & G.

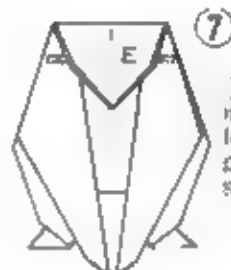


⑤

\$T_L\$ GVS

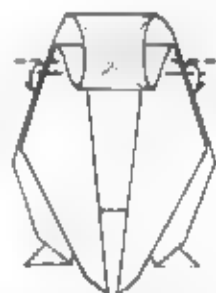


B Fold A & d
ward on the
main fold.
Fold reverse
sides on the
dotted lines.
Fold E down on
the valley fold.



⑦

7 Put your fingers inside the pouches formed by E and push them up as shown in 1.



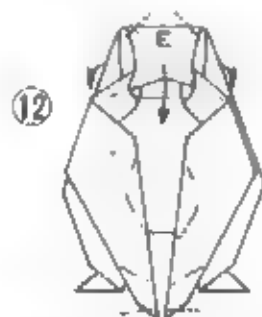
9

§ Make salt pen n
around the neck area



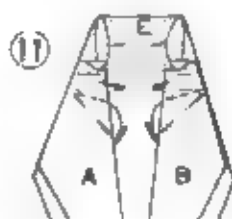
⑬

Finis



12

12 Make the mouth leaving it round and soft. Shape the nose and eyes by making small pleats. Bring the face down and shape the whole figure along the mountain folds.



⑪

11 Around the shoulders, to a mountain and valley folds toward the back of the arms. Fold the neck area inward as arrows indicate.



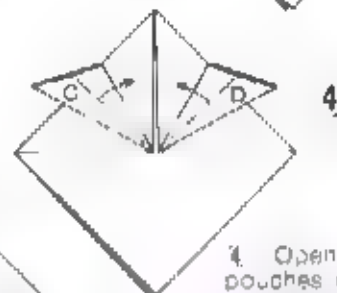
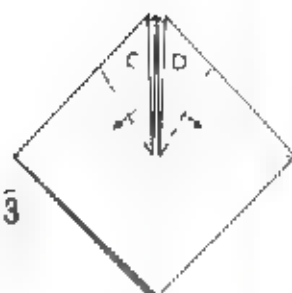
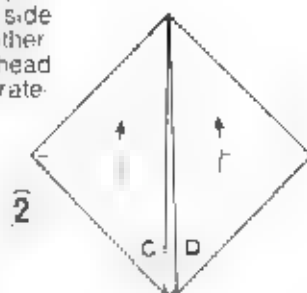
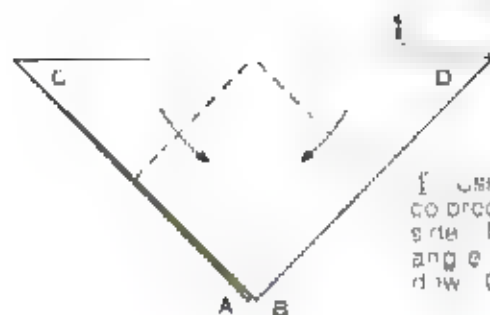
10

- spread Love

Head

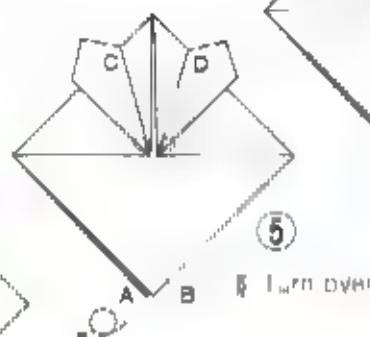
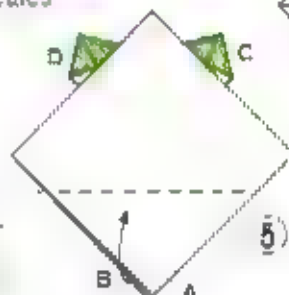
Fold the paper in half and by using two sheets of paper back on one side white on the other to make the head and body separately.

1. Use the white colored side of the paper. Make a triangle and fold down C & D.

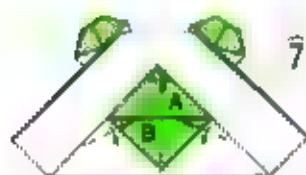


4. Open up the pouches of C & D with your fingers to the shape shown.

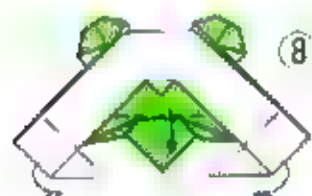
5. Fold B only as the arrow indicates.



6. Turn over.



7. Consider the size of the muzzle. Fold A a bit and fold corners of B to make the eyes.



8



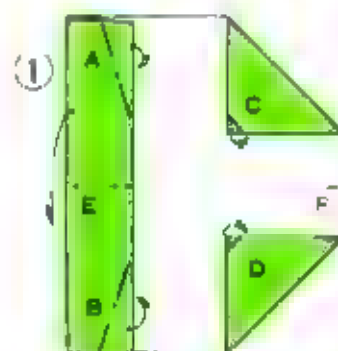
9

Finish

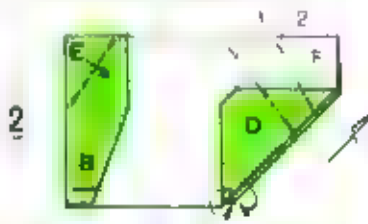


10 + 5

Body



1. Fold a square piece of paper as shown. Fold at corners as shown. Fold in half on the center mountain fold.



2

2. Fold the bottom edge inward on the mountain fold and fold inward on the mountain fold and bring up on the valley fold.

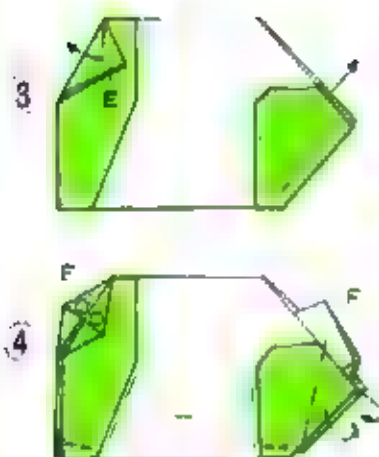


GIANT PANDA

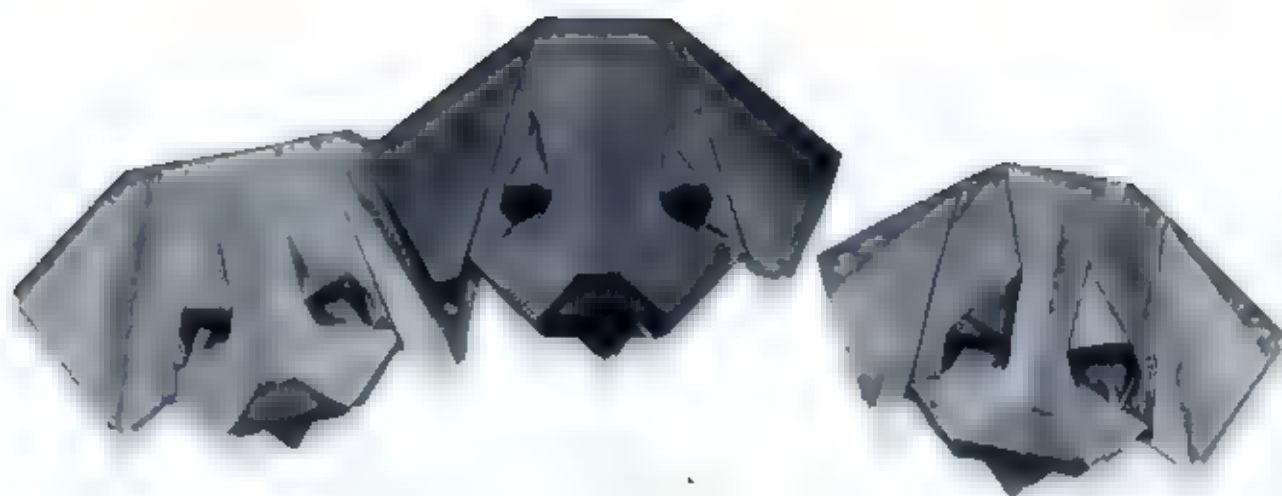
Next, we would like to fold the giant panda, that rare charming animal which is found only in China.

In the beginning, I tried to make a realistic panda out of one sheet of paper. However, it was impossible to produce a good figure without more knowledge of the animal, so I, on the other hand, showed the crowds at the Ueno Zoo in Tokyo to see them. It was so crowded that each person only had about 30 seconds to observe them. A friend arranged for me to look at a documentary film on pandas and one of the keepers told me about their habits and characteristics. Pandas are generally carefree animals and usually sleep long hours.

I used two sheets of paper to make it easy to fold. Depending on how you arrange the head on the body, you can make your panda show various expressions. I made the face rather simple with thick upper eyelids. Just the head alone makes a nice object.



- 4 Push parts inward under the
a. Make darts at the front and
rear feet to make it stand up.
Hook of G of the head over
the body.



THE FACE OF A DOG

ORIGAMI AS FORMATIVE ART – PART I

In the process of raising children, it is very important to clarify the following factors in order for children to know exactly what is going on in their lives: **when, where, who, what and how.**

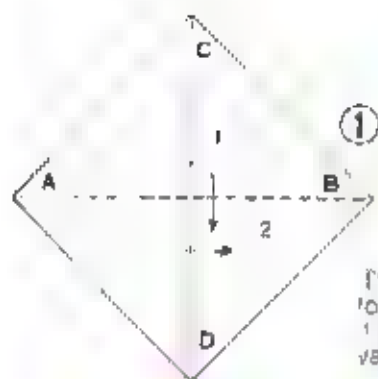
All mammals and human beings adjust themselves to the constantly changing environment by using their perceptive organs of vision, hearing, smell, touch and taste and furthermore, they cooperate with each other by communicating with voice and sound. I have tried to illustrate the fundamental knowledge that leads us to a healthy life in my *Formative Origami*. I want to activate children's sense of beauty and love through the themes that they wish to fold. As an example, let us choose a puppy.

Spring and the fields are covered with pretty green grass. I can't see it but I can hear a puppy crying. It's coming nearer and nearer. There I can see its face.

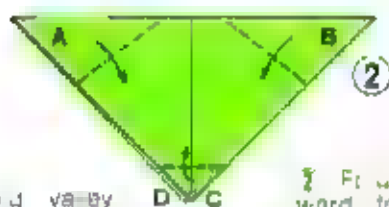
After telling the children this, you can make the face of the dog shown in (A) and by moving its mouth, you will delight them by mimicking the cries of a puppy. Then you can illustrate a puppy's sense of smell by saying, "Oh, I can smell something good." And you can wiggle the puppy's nose.

In order to catch and hold the attention of active children, it is essential to create the action and movement of the object clearly. You may continue your story by saying, "I see many more puppies. Why don't we go and play with them?"

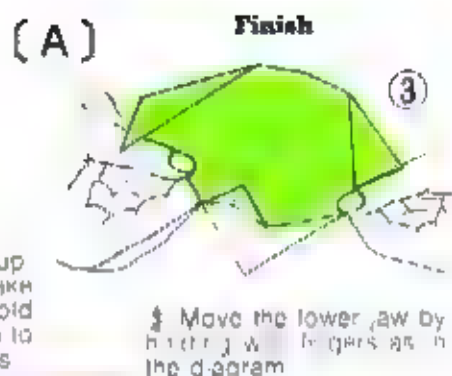
Origami can be used in this way in the formative educational field. We can make up many stories to entertain children and fill them with imagination through the art of origami.



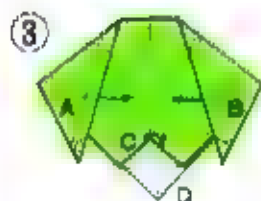
1 Fold valley fold 1 first Open 1 up and fold valley to d 2



3 Fold D upward to make the nose Fold A & B down to make the ears



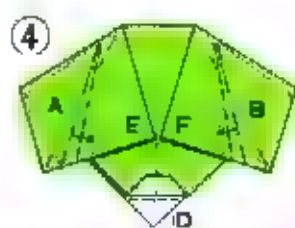
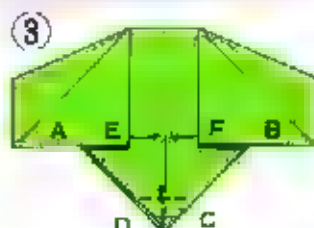
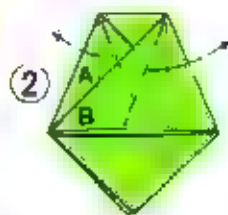
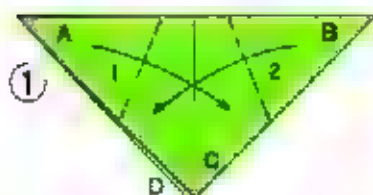
4 Move the lower jaw by holding with fingers as in the diagram



(B)

Follow the same steps shown in (A)
1 Put the paper piece A & B on the dotted lines Fold C upward and fold the pointed part backwards

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



1 Fold along the diagonal line 1 & 2. Fold A first and B second

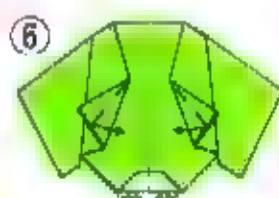
2 Open up the piece of paper Fold A first and B second

3 Fold C with D to make the muzzle Put E & F toward the center and press them firmly with fingers

4 Fold a small pleat on D to make the lower jaw and close. Make ears by folding valley and mountain folds on A & B

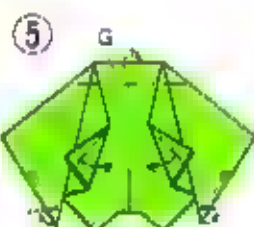
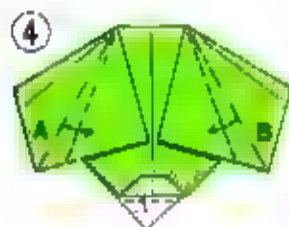


(C)



Finish

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

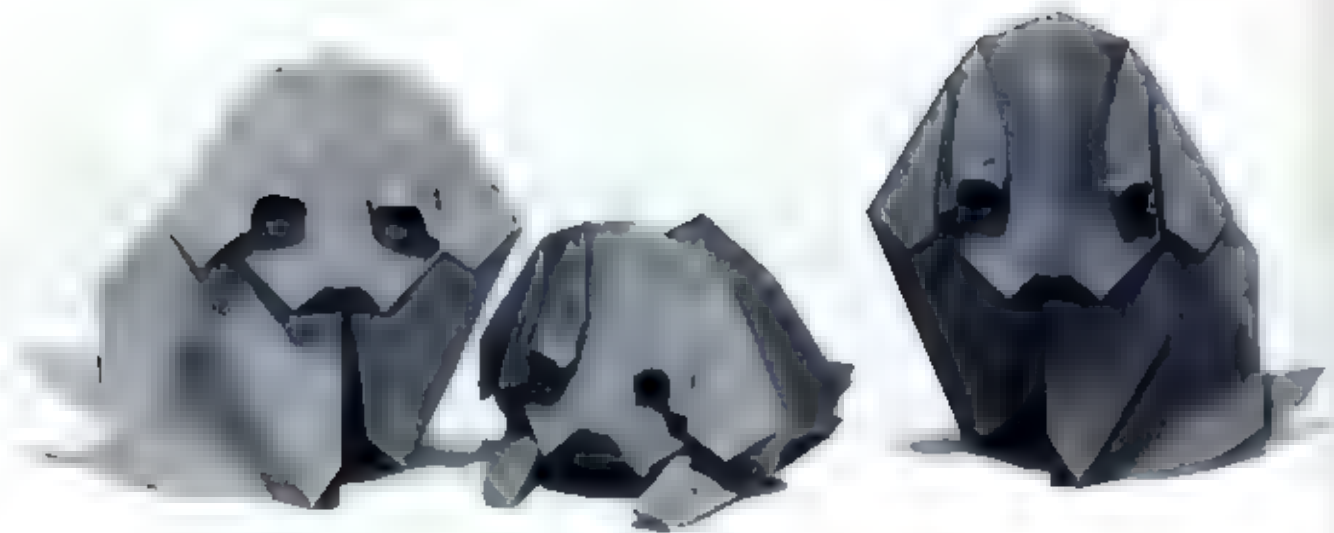


(D)

Finish

Follow the same steps 1-4 of (C)

5 Make ears by marking mountain and valley folds that run horizontally. Then fold in direction of arrows



PUPPY

ORIGAMI AS FORMATIVE ART — PART II

I would like to talk about having fun with origami and use a puppy for our theme.

Here, let's make the nose first by bending a bit of the corner of A in 1. Instead of making this step 4 stand it up on DB and CB as base lines, and you can easily imagine a puppy sitting on the ground and looking up at the sky.

Saying "A nice smell is coming from behind you" you can fold on the valley fold of 2 and turn the head backwards. Now the puppy looks as if it is sniffing the air.

Then you can work on A of diagram 3 and push it open as in the following diagram 4. Before making the ears, you can say to the child "This puppy cannot hear a word ever when its friends are calling. I wonder why?" The child will probably answer "looking at E and F which do not look very much like ears." "He doesn't have any ears."

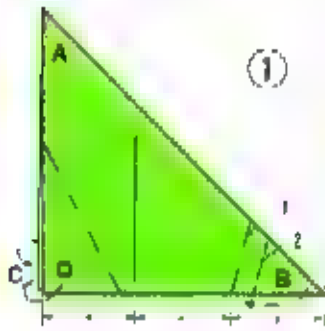
Let's make him some. Let the child fold the ears. Children usually fold E and F as they like. Those who studied how to make the face of the dog on the previous page will certainly know how to make the ears by bending the corners on both sides of the head. It is this kind of insight learning that is so important for nurturing creativity in the minds of children.

When you have made a pretty good looking puppy like the one in diagram 4, you can continue your game by saying "His friend is calling him. He is over there on the right hand side." Now you can fold the valley fold in diagram 2 in the opposite direction and change the posture of the upper body. You could suggest that the child alter the puppy's posture by turning the nose up or down, to the right, or left, or bending the neck diagonally. The results will vary according to the mental, spiritual and intellectual growth of each child. There will also be a noticeable difference depending on whether the idea is centered on the child himself or around the object, in this case the puppy.

Here I have shown how to fold a puppy but an adult dog can be made by shifting the valley line in diagram 2 which will change the proportions. It will be fun to make a parent dog with a puppy, a puppy and its friends. The puppy can be made to show its happiness by wagging his tail.

So you see, out of one sheet of paper you can show various aspects of life to illustrate **when, where, who, what and how**. Furthermore, you can learn about "shape and posture" which are fundamental elements in formative art. Most important of all, the exciting world of Creative Origami opens up before children.

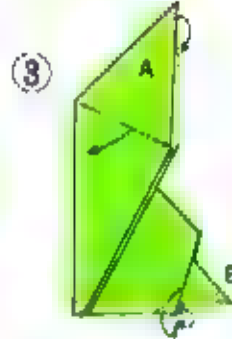
PUPPY



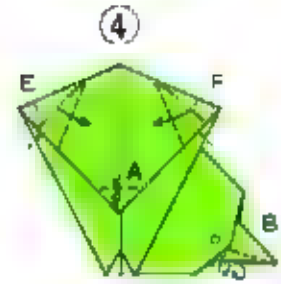
1 Fold a square piece of paper along the diagonal line Fold C & D inward Fold B in on the mountain fold



2 Fold A to the valley line Fold B into the valley line from the mountain fold Pull B out at the dotted line 2



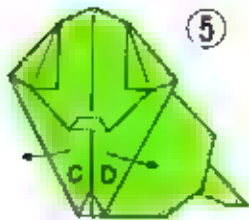
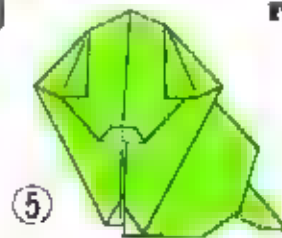
3 Open A a bit make the face Fold the corner under B ward



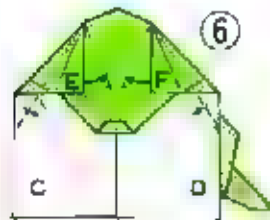
4 Fold B narrower to make the A, F, & A twice to make the nose Fold and slide the mountain and valley folds a bit to make the ears as in 5

(A)

Finish



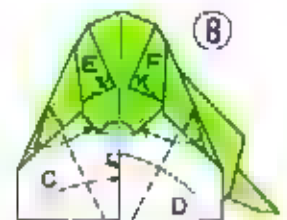
Follow the same steps 1-5 for the puppy. Open up C & D as arrows indicate



6 Bring E & F close to the center and fold



7 Fold the mountain and valley folds to make narrow triangles then slide them to the dotted lines and pull them

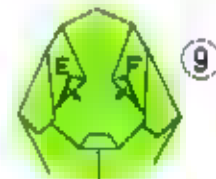


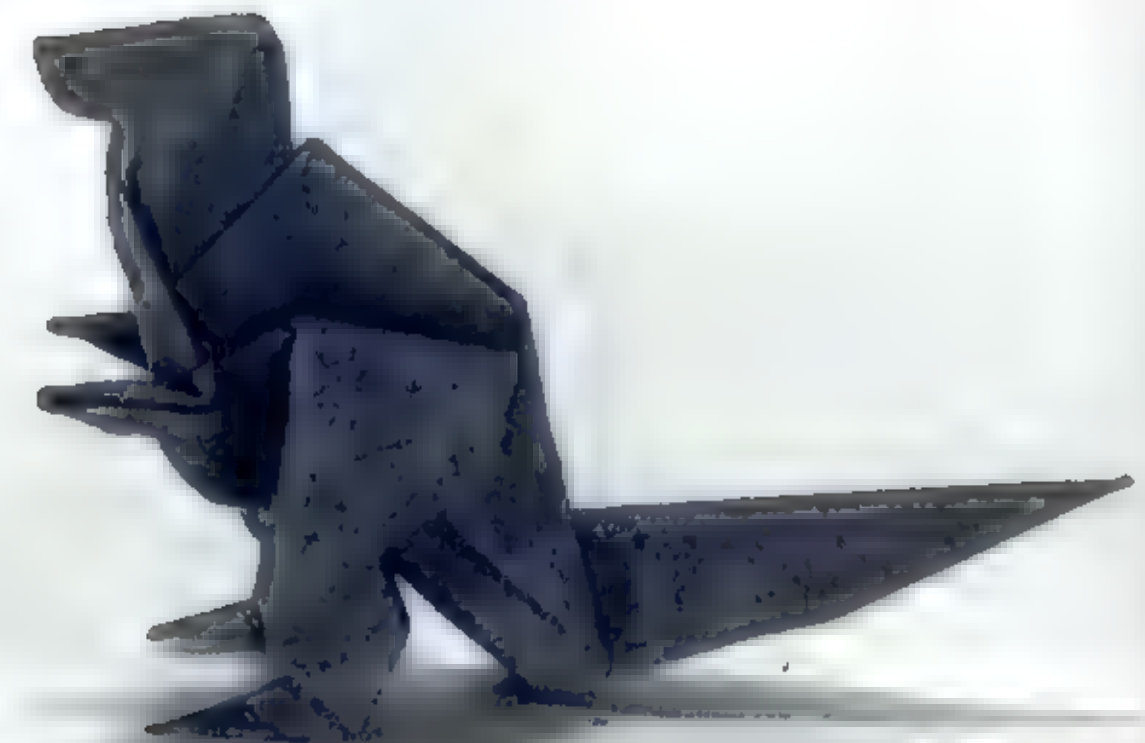
8 Fold E & F to make the eyes Fold mountain and valley folds under the ears Fold C & D once again

SPANIEL PUPPY

Finish

(B)





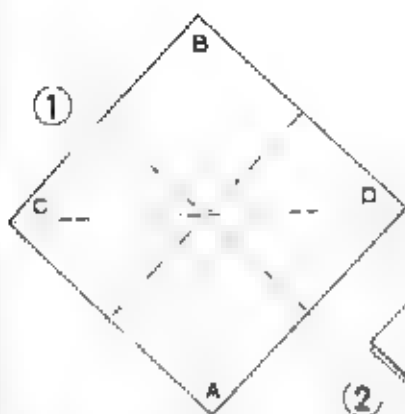
IGUANODON

Let us fold an Iguanodon, an herbivorous animal which existed between the Jurassic and Cretaceous periods 140 million years ago. Try to imagine its physique and posture when it was walking about the land.

Origami is not something that you should be satisfied with after completing one figure. Repetition will enable you to make increasingly better objects. After you become good at making this animal, you can try making it in the various poses shown in (A), (B), (C), and (D).

Also, if you gently pull the chest and tail out in diagram (E) and expand the body with your finger or a small stick, it will become 3-dimensional and look very powerful. If you make the neck slender with a smaller head, you will have a Brontosaurus. Study these animals in illustrations to familiarize yourself with them.



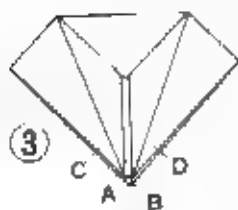


1. Mark mountain and valley fold lines on a square piece of paper to make 1/2

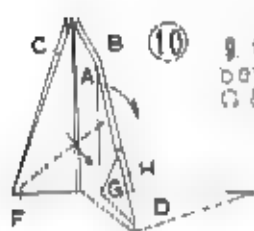
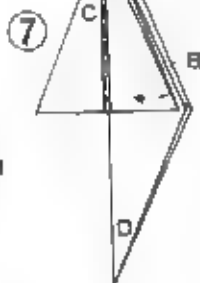
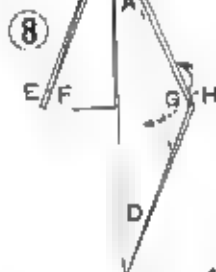
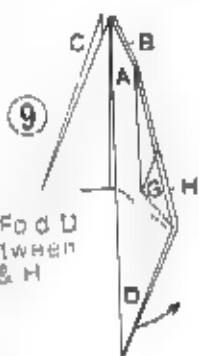
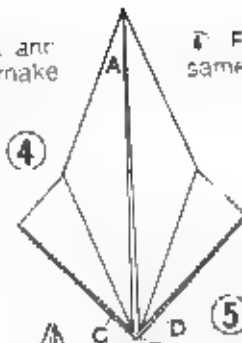
2. Fold according to numbers listed



3. Open up A and pull it out to make 1/4



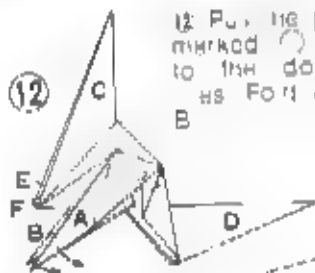
4. Fold B the same as A



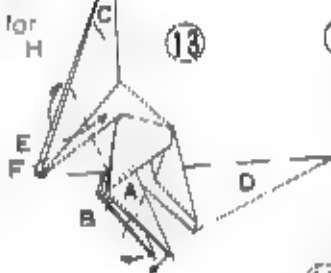
8. Fold D between G & H

9. Fold C for ward and H backwar

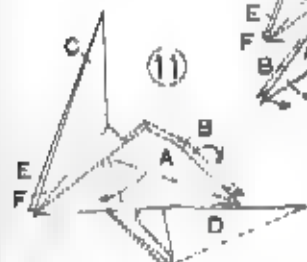
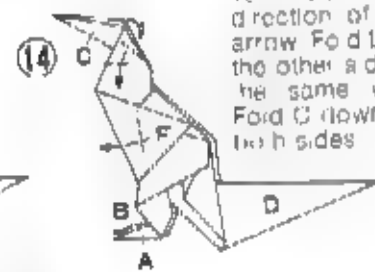
10. Fold A for ward and B backwar



12. Pull the part marked out to the dotted line as Fold A & B



14. Fold F in the direction of the arrow Fold L on the other side in the same way Fold C down on both sides



11

12

13

14

15

16

15. Fold E & I near lower to make the fork HGS



Finish

17



17. Move A to the dotted lines by folding on mountain and valley to do. Fold B toward back following the same steps you did with A

A. Slurped



B. Eating



C. Walking fast





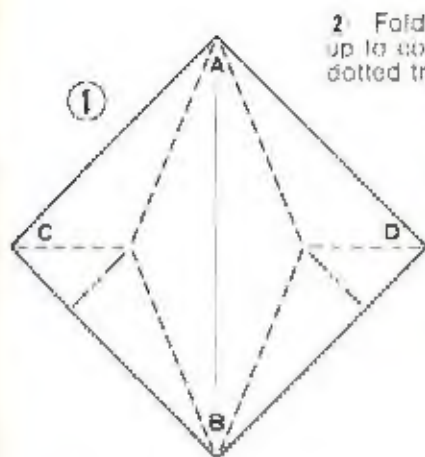
ELEPHANT

I think it would be nice to make a baby elephant whose tusks are just beginning to grow. Use a piece of gray paper with a white back and make the tusks with the white side.

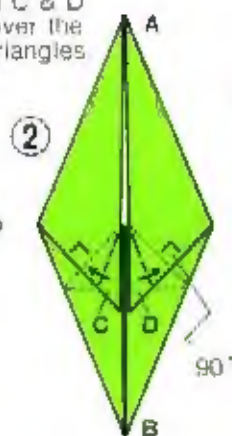
This is a good example of Creative Origami made in the free expression style. For instance, I folded this elephant freely as though I were working with clay. I omitted unnecessary details and emphasized the main lines to make it easy for you to fold.

This is the most fundamental method of folding animals when you are concerned about their build and different postures. Through the art of origami, you can learn so much as you discover the delicate relationship that exists between the diagram and the 3-dimensional end product.

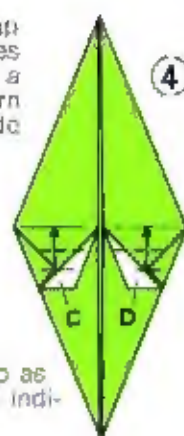
When making an elephant without tusks, you may skip the steps from (3) to (5). You should proceed from (6). You can make elephants in many poses, with their trunks stretched out or raised above their heads.



2 Fold C & D up to cover the dotted triangles



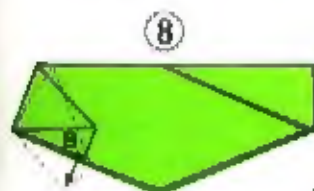
3 Open up the pouches of C & D a bit and turn them inside out.



4 Fold up as the arrows indicate.



1 Mark the diagonal crease AB. Then, mark all the valley folds using the diagonal line. Pinch C & D and fold them down as in the diagram.



7 Fold B on the valley fold in the direction of the arrow.

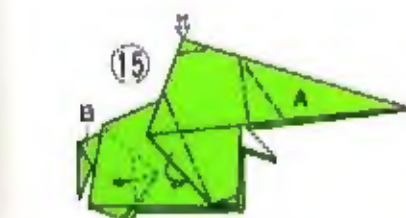
6 Fold A & B on the dotted lines as arrows indicate.

5 Fold C & D narrower and bring them down. Bring C over D.

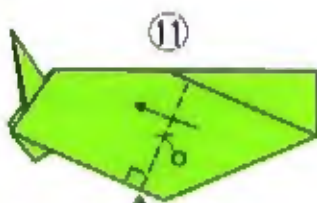
8 Bring B down to the dotted line.



9 Bring the tip of B up to the dotted triangle



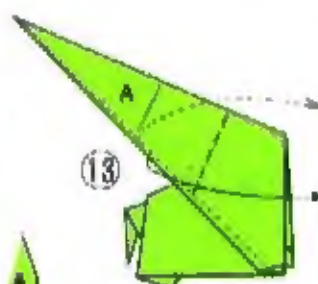
10 Spread B out once then fold it in and out to make the tail



11 Fold as shown in the diagram.



12 Fold B down between shoots. Fold A to mark the valley fold. Then, spread it out and fold over the dotted line to make 14.



14 Pull A to within the dotted line. Pull out the hunks which are under the body



15 Pinch the mountain fold from outside and shape the body line. Fold the trunk as in the diagram.



Finish

13 Fold as arrows direct. Pinch A and fold it down between flaps.



About the Author

Akira Yoshizawa was born in Tochigi Prefecture in 1911. His interest in origami began from the time he was a child, when he started to study and create figures.

His serious work commenced in 1938 while he was employed in a steel mill. In 1950, as a result of the publication of his educational origami, he embarked on what was to become his life work of using origami for the benefit of society and he was often written up in the media, held exhibitions and gave lectures.

In 1954, International Origami Study Society was established, which played a great part in spreading interest in origami nationally as well as abroad.

Dr. Gershon Logman organized the exhibit for Yoshizawa's works at Museum in Amsterdam, Holland in 1955. This brought him to the attention of the international art world for his extraordinary creations and he subsequently held exhibitions in many places.

Exhibitions were held in 1957 in Tokyo and Yokohama. After that he exhibited in many other cities in Japan.

Mrs. Lillian Oppenheimer visited Tokyo in 1959 to meet Yoshizawa for the purpose of founding the Origami Center of America. She held an exhibition in the Cooper Union Museum in New York and then showed his works in the United States.

He won the Mainichi Culture Award for Publication for his book, "Tanoshii Origami" in 1963.

From 1966 to 1984, under the auspices of the Foreign Ministry and the Japan Foundation, Yoshizawa visited Australia, New Zealand, Europe, Southeast Asia and Central America, a total of over 30 countries, as lecturer and teacher of origami and contributed very much to international relations.

In 1970 and 1971, the International Readers' Digest magazine did an article on him which was circulated around the globe.

He received the Mobil Children's Culture Award in 1971.

1983 was the year in which he was decorated with the Order of the Rising Sun, fifth class. He also held an exhibition in the city of Philadelphia.

In 1984, in both Paris and Tokyo, sponsored by the Asahi Newspaper and Pierre Cardin, he had a one-man exhibition.

Yoshizawa opened his own atelier and display room in 1985. It gives him a place for exhibition where he is also able to work on his publications. He continues to be active throughout the country teaching, not only the art and techniques of origami but also explaining his theory about it.

In 1986, he received the Foreign Minister's Prize, in recognition of his 20 years of contribution to mutual understanding among the nations of the world as he traveled as an emissary of Japanese culture.

Other Books by Akira Yoshizawa

Origami Geijutsu (Art of Origami)

Origami Tokuhon I (Origami Reader I)

Origami Tokuhon II (Origami Reader II)

Tanoshii Origami (Joyful Origami)

Origami Ehon (Origami Picture Book)

Yasashii Origami (Easy Origami)

Utsukushii Origami (Beautiful Origami)

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